Spectr. Te

Focus....

Spectr. Te

Exp. Mtr.

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				David Dunlap Observatory							
				74" Logbook							
				Vol 58							
				Plate Nos.			47831	48712			
				Jul 83 —			Nov 84				

5

TOUR 20 people looked at M13

Date Mon. Tues. July 11-12. 83 Observers K.L.Y. - R.

8m 68° Emulsion Batches:
4½m 68° IIaJ-E 08102 - 03073
IIIaJ-E 09023 - 06073 BA1180 27 [illegible]

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47831	HD 108662	12h 23.9	+26°28'	20:46	21:02	0335W	+26°00	Fe/-	444
47831F	FOCUS TEST							Fe/-	2020
47832	HD 108945	12h 26.0	+25 07	21:06	21:42	0412W	+24° 39	Fe/-	444
47833	HD 205073	21 27.8	+47° 55	22:23	01:56		+48° 16'	Fe/-	444
47833T	SPOT CAL FOR PLATES 47831-34				15 MIN @ 15 VOLTS	① D4 3900	① D3 4300	① D2 4810	
47834	HD 205331	21h 29m.5	+47 51	2:03	3:11	0040W	+48° 09'	Fe/-	44
47835	HD 3712	00h 34.8	+55°59'	3:16	3:20	00218W ?	+56° 25'	Fe/-	6-6
47836	HD 8890A	122.6	+88 46	3:35	3:42	0339E	+89 10	Fe/-	20 20
47837	HD 3712	0 34.8	+55 59	3:49	4:06	0132E	+56 25	Fe/-	20-20
47837T	SPOT CAL FOR PLATES 47836-37				15 MIN @ D4	① 17.5V 3900	① 15V 4300		

Spectr. Temp. 79°F Dome Temp./Hum. 75°F 70% Transparency Conditions hazy 6

Focus 508 std wrong focus

Spectr. Temp. 73° Dome Temp./Hum. 70°F 90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/81	1-2"	5.3	Ap	B.C.	830/.68	B.S.	IIaO-E	B	Am+Ap		
				B.C.	830/.68	B.S.	IIaO-	A		std wrong focus	
40/40	1-2"	5.5	Ap	"	830/.68	"	IIaO-E	A	Am+Ap		
400/400		7.89	Am (A0/A1/A)	B.C.	830/.68	B.S.	IIaO-E	B	Am+Ap/JBL	BROKEN 3 PIECES T=78°F T=508	
							IIaO-E				
200/200	1"	6.8	Am (B95/A1A1)	BC	830/.68	B.S.	IIaO-E	A	Am+Ap JBL	T=75°F T=505	
40/24	1"	2.2	KO IIIaJ	"	"	"	IIIaj-eb	B	std Vel	THROUGHT IT WAS 4 GAIN T=740 T=505	
40/129	1"	2	F OG1	"	1200/.025	"	IIIaj-eb	A	Polaris	T=740 F=506	
4/24	1"	2.2	KO IIIaJ	"	"	"	"	B	std Vel		
							IIIaj-eb				

7

JD 2445528.6

Date Tues/Wed July 12/13 1983 Observers Rm-Ri

Emulsion Batches:
4½ᵐ 68° ~~IIaO-E 09102-10073~~
098-02 05031-06073

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~47838F~~	Focus Test							Fe/—	26-24
47838	HD 162714 = YOph	17ʰ47.3	−06°07	20:41	23:35	0ʰ 28W	−6°09	Fe/—	6/6-6
47839	HD 161096	17ʰ38.5	+4°37	23:43	23:47	1ʰ 09W	+4° 34	Fe/ND Ne/ND	12 12 / 12 12
47840	HD 180583 = HR 7308	19ʰ 12.0	+27°45	23:51	00 35	0 25W	+27° 54	Fe/ND Ne/ND	12-12 12 12
47840T	Spot Cal for 47839			15 min @	15v D3 4810	7v D1 Hα	7v D2 5460		
47841	HD 183349 = UAql	19ʰ24.0	−7°15.0	00 40	1:33	1ʰ 10W	−7°05	Fe/ND Ne/ND	8-8-8 8-8-8
47842	HD 185758 = α Sge	19ʰ35.6	+17°47	1:37	1:44	1ʰ 10W	+17°58	Fe/ND Ne/ND	12-12 12 12
47843	HD 186688 = SU Cyg	19ʰ40.8	+29°01	1:47	2:42	2ʰ 03W	+29°14	Fe/ND Ne/ND	8-8-8 8-8-8
47844	HD 187921 = SV Vul	19ʰ47.4	+27°12	2:45	4:03	3ʰ 16W	+27°23	Fe/ND Ne/ND	8-8- 8-8-

Spectr. Temp. 50A ..... Dome Temp./Hum. 75/66% Transparency Conditions clear 8

Focus 81

Spectr. Temp. 71°F ..... Dome Temp./Hum. 65°F 83%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	IIaO	A			
400/120	3-4	~7.1	G3Ib	BC	"	"	IIaOE	B	Ceph/Evans	1" broken off blue filter in exposure meter	
4/16		3.9	K2III	BC	1200/.7	RS	098E	A	5-Hd Vel	blank filter in exposure meter T=76°F Focus 506	
25/80		~6.7	F6-IIb	"	"	"	"	B	Ceph/Evans		
							098E				
40/160		~7.9	F5-I	"	"	"	"	A	Ceph/Evans	T=74°F	
8/32		~5.3	G0II	"	"	"	"	B	Ceph/Evans	T=74°F	
40/140		~6.8	F0	"	"	"	"	A	Ceph/Evans		
40/160		~8.4	F7Iab K0Iab	"	"	"	"	B	Ceph/Evans	T=72°F 507	

9 B.S. IN (incorrectly) WHAT DO YOU MINF INCORRECTLY?
"B" FILTER IN FK MTR. unclamped - Tn 8^m 67°

Emulsion Batches: IIa0-E 08102 - 10073

Date July 13-14 1983 Observers Fln.-Tn

Wed – Thurs

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47845F	Focus Test					0^h:15^m W	+1° 55'	Fe/–	19-19
47845	HD 165174	17^h 59.^m6	+1° 55'	20:39	21:15	1^h:40^m E	+1° 55'	Fe/–	4-4-4
47846	"	"	"	22:18	22:52	0^h:03^m E	"	"	4-4-4
47846T	Spot Calib for	47845-	54	. 15min @15V		D4 3900	D3 4300	D2 4810	
47847	HD 165174	17^h 59.^m6	+1° 55'	22:53	23:27	00^h:31^m W	+1° 55'	Fe/–	4-4-4
47848	"	"	"	23:28	00:05	01^h:10^m W	"	"	4-4-4
47849	"	"	"	00:07	00:46	01^h:51^m W	"	"	4-4-4
47850	"	"	"	00:47	01:23	02^h:27^m W	"	"	4-4-4
47851	"	"	"	01:24	02:03	03^h:07^m W	"	"	4-4-4
47852	"	"	"	02:04	02:53	03^h:58^m W	"	"	4-4-4
47853	HD 204867	21^h 26.^m3	−6° 01'	02:58	03:04	00^h:42^m W	−5° 37'	"	6-6
47854	HD 203156=HR 8157	21^h 15.^m4	+37° 49'	03:08	03:48	01^h:38^m W	+38° 10'	"	4-4-4

Spectr. Temp. ..78°F..... Dome Temp./Hum. ..74°F./H=68% Transparency Conditions .Fine.....1P..

Focus ...504.....

Spectr. Temp. ..70°F..... Dome Temp./Hum. 67°F/...80% GIS tour 21h:15 – 22h:15; observed M13.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	IIaO	A		broken 1/2 sound	
40/41	2"	6.15	09.5III	"	"/"	"	IaO-E	B	Var-Bln		
40/40	2"	"	"	"	"	"	"	B	"		
							"				
40/39	2"	6.15	09.5III	BC	830/.68	BS	"	A	Var-Bln		
40/40		"	"	"	"/"	"	"	B	"		
40/40	2"	"	"	"	"/"	"	"	A	"	T=74°F; F=505	
40/40	2"	"	"	"	"	"	"	B	"		
40/40		"	"	"	"	"	"	A	"		
40/28		"	"	"	"	"	"	B	"	Bad seeing.	
20/21	2"	3.7	G0Ib	"	"	"	"	A	STOVEL		
20/25	1"	6.17	F2	"	"/"	"	"	B	Cepheid/Evans	T=71°F; F=506	

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Date July 15-16 1983 Fri - Sat. Observers F.In - T.n

δ^m 68° Emulsion Batches: IIa.O-E 08102 - 100773

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47855	HD 175174	17h 51m 6	+1° 55'	20:41	22:27	00h 21m E	+1° 56'	Fe/-	4-4-4
47856	"	"	"	22:30	23:49	01h:01m W	"	Fe/-	4-4-4
47857	"	"	"	23:50	01:52	03h 05m W	"		4-4-4
47858	HD 175426	18h 50m 2	+36° 51'	02:00	02 45	03h:09m W	+36° 56'	"	6-6-6
						D4	D3	D2	
47857T	Spot Calib	for 47855-59			[illegible]	3900	1:00	1810	
47859	HD 217782	22h 58m.0	+42° 13'	02:48	03:20	00h:25m E	+42° 39'	Fe/-	6-6-6

Spectr. Temp. ...87½ °F..... Dome Temp./Hum. 85°F / H=72% Transparency Conditions . Hazy ..... 1.2..

Focus ... 50.3.....

Spectr. Temp. ..80°F..... Dome Temp./Hum. 76°F / H=86%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/126	2"-3"	6.15	09.5III	BC	830/.68	BS	IIaO-E	A	Var-Bln		fine
200/150	"	"	"	"	" / "	"	"	B	"		
200/134	3"	"	"	"	" / "	"	"	A	"	T=83°F	
40/60	1-2"	5.2	B3	"	1200/-.025	"	"	B	SB-Ly	T=81°F	fine
							"				
-3/66	2"	5.17	A2	RC	1200/-.025	BS	"	A	KK Asm Sp	gusty	fine

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Date July 16-17 1973 Observers Fln-Tn

Sat-Sun

8PM 68°

Emulsion Batches:

IaO: E .03.02. -1.0973

IIaO: E* .08.102. -.1507 3

with 7/21-22 batch

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47860	HD 165174	17h 53m6	+1° 55'	23:05	23:56	01h 14m W	+1° 58'	Fo/-	4-4-4
47861	"	"	"	00:01	00:50	02h 06m W	"		4-4-4
47862	"	"	"	00 54	02:09	03h 26m W	"		4-4-4
47860T	Spot Cal's	for 47860-61			15mm @ 15V	D4 3900	D3 4300	D2 4810	
47863 X	HD 212943	22h 22m9	+4° 12'	02:13	03:06	00h 01m W	+4° 10'	Fo/-	4-4-4
47863T	Spot Cal's	for 47862-64			15mm @ 15V	D4 3900	D3 4300	D2 4810	
47864	HD 210456 HCP 1137	21h 5m4	+37° 49'	03:12	03:57	01h 59m W	+35° 50'	Fo/-	4-4-4

Spectr. Temp. ..81.°F..... Dome Temp./Hum. 73°F/H=72% Transparency Conditions . semi-cloudy..... 14.....

Focus .....503.....

Spectr. Temp. ..73°F..... Dome Temp./Hum 69°F/90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/85	2"3"	6.15	[illegible]	BC	830/.68	BS	IIaO-E	A	Var-Bin	some cloud	fine
80/80		"	"	"	" / "	"	"	B	"		fine
80/85	3"4"	"	"	"	" / "	"	IIaO*-E	A	"	T=78°F; some clouds	fine
					/		IIaO-E				
40/40	2"	5.9	K0III-II	BC	830/.68	BS	IIaO*-E	B	STEVEL	clouds	fine
							"				
40/40	3"4"	6.17	F2	BC	83 /.68	BS	"	A	Cepheid/Evans	T=7[illegible]F; F[illegible]	fine

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Date ..... Observers .....

Emulsion Batches:
IIIa-F-56 09023 06073
4" 68° 09802 05031 06073

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
			46	34	20 50	9 57E			19-19
47866	TT Aql = HD 176367	19h 03.2	+01° 08	21 04	22 56	0 40E	+1° 17		8 8. 8 8 8
47865T X	Spot Cal for	Alter - 70		15	9510 D5 5V	HD 5450 D5 7V			
47867 *	HD 161096	17 38.5	+9°37	23:05	23:21	1h 10W	+4° 38		
47868	"	"	"	23:25	23:37	1h 27W	"		
47869	HD 170583 = HR 6938	19h 12.0	+27°45	23:45	0 56	1h 13W	+27°57		
47870	HD 201078 = DTCyg	21h 02.3	+30° 47	1:01	1:33	0 00W	+31° 10		

Spectr. Temp. ..... Dome Temp./Hum. 75°F / 70% Transparency Conditions ... Some Cirrus ... 16...

Focus .....

Spectr. Temp. 76°F ..... Dome Temp./Hum. 71°F / 60% ..

note - for plate #s 47866-67 dome slit was not fully connected. only a slight problem upon doing mid comp for 47866

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
[illegible] / 100	2	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		vsl. str.
40/148	2	~8.3	GG13	82	120 / .7	45	098	B	Capt/Evans	GG13 blocks ultraviolet exposure some cloud	fine
							"			maybe ~1 hr of T-max due to dome problem	
40/149	2-3	3.4	K2 III	"	"	"	"	A	Std Vel	probable no Cu-arc dome problem discard	Blank †
40/150	"	"	"	"	"	"	"	A	"		fine
40/152	3	~6.7	FGF III b	"	"	"	"	B	Capt/Evans		fine
40/153	3	6.6	F7 I-II	"	"	"	"	A	Capt/Evans	T_sun = 76°F cloud	wk †

high fog on all 098's

† 2 plates damaged in fall from developing rack

17

Date July 21-22.183 (Thurs-Fri) Observers Klg.-T.

5m 68° 0.19 in tray
8m 68°
with 7/16·17 batch

Emulsion Batches:
IIaJek 09023 - 06073
IIaO-E 08102 - 15063

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47871	HD 137909	15 23.7	+29 27	20 33	21:01	0 14 W	+29°12'	Fe/-	19-19
~~47872~~	~~HD 8590A~~	1 22.6	+88°46	21 08	21:17	0 22 E	+89 40'	Fe/-	19-19
47872	HD 205673	21h 27.8	+47°35	21:44	00:14	0 11 E	+48 19	Fe/-	4-4-4
47872	Spot Calc for 47871.			15 min exp		3900 17.5V	15V 4300	15V 4210	
47873	HD 205198	21 28.6	+48 12	00:46	4:08	2 15 W	+48 37	Fe/-	4-4-4

Spectr. Temp. ..77°F ↓ (fast) Dome Temp./Hum. +72°F/86% Transparency Conditions Fine ..KB...

Focus ....504.....

Spectr. Temp. ...65..... Dome Temp./Hum. +58°F/80%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/101	5"	3.93	FOp	BC	1200/.025	B	IIaJeb	A	Asm Sp tilt	Arc misfire sl. high fog	fine
~~20/100~~	"	~~2~~	F	"	"	"	"	B	~~Polaris~~	Completely Shuttered Lost	
400/400	4"	7.9	Im	"	830/.68	"	IIaO-E IIaJ-E	A	JBL Am+Ap	74° set 504	fine uneven*
440/364	3-4"	5.3	Am	BC	830/.68	B.S.	IIaO-E	B	"	70° set 506	vs/wk

* Tray developed for test

Note - These IIaOs were added to the undeveloped IIaOs from July 16-17

19

Fri Sat

Date July 22-23/83 Observers Tn - K l-y

5m 68°

Emulsion Batches:
IIIaJ 09023 - 09073
IIaO-E 08102 - 15063

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
47874	HD 8890A	1 22.6	+88 46	20 27	20 36	10.0E	+89 11	F-1-	19-
47875	HD 186791	19 41.5	+10 22	20 48	21 00	0°02E	+10 37	F-1-	9-
47876	HD BD+47 3452	21 28.2	+48 04	21 21	02 24	0037W	+48 26	F-1	4-
47877	HD 3712	0 34.8	+55 59	02 31	02 39	0215E	+56 28	"	16-
47878	HD 203156	21 15.4	+37 49	02 48	0°22	0148W 17.5V	+38 13 15V	"	44
47878I	Spot Calc. for	47874, 77, 79.			15 min DA	3900	9300 4810		
47879	HD 8890A	1 22.6	+88 46	03 33	03 44	0253E	+84 12	F-1-	17-
47879F	Focus	test				0 0	+10°	F-1-	27-

Spectr. Temp. +74°F Dome Temp./Hum. +73°F / 58% Transparency Conditions Fine - thin haze 20

Focus 505

Spectr. Temp. 64.5 Dome Temp./Hum. +62°F / 77%

Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1	20/90	2"	2	F	BC	1200/+.025	BS	IIIa-J-eb	A	45m Sp		fine
2	20/	2-3"	4	K	"	"	"	IIaO-E	A	Std. Vel.	T=73° Set 507	
3	40/330	3"-1"	9.	Am	"	830/.68	"	"	B	JBL Am+Ap	Slit area light was on for some time exp.	slight flex. fine
4	20/63	2"	2.5	ko IIIa	"	"	"	IIIa-J-eb	A	std Vel		slightly strong
4A	40/-4	2"	6.7	F2	"	"	"	- OE	B	Sept Evans	Set 507 T=65°F	
								IIIa-J-eb				
5	20/95	2"	2	F	BC	1200/-.025	BS	"	A	45m Sp		fine
5A					"	"	"	IIIa-J-eb	B		Set 507	blue shed red sl blue

21 Sun - Mon

Date 7/4, 24-25/83 Observers KK, KK, TK

5m 68°

Emulsion Batches:
IIIa-J 09013 - 12073
IIIa-F 08102 - 15053

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
47880	ν Drac	17	+50	20:43	20:55				
47881	ν Drac	17	+50	20:59	21:10				
47882	ζ 2130	17	+55	21:15	21:22				
47883	HD 8890A	122.6	+88 46	21:47	21:56	28 E	89 10		
47884	HD 137409	15 26.8 (33.7)	+29 11 (27)	22:01	22:38	02 51W	+29 12	Fe/-	
47885	HD 159561	17 30.3	+12 38	22:33	21:38	00 56W	+12 37	Fe/-	
47886	HD 172640	19 20.5	+2 55	22:43	23:05	00 26E	+3 07	Fe/-	
47887	HD 183912	19 26.7	+27 45	23:19	01:30	01 53W	+27 55	FeNe wr6	13-1
47888	HD 186791	19 41.5	+10 22	01:43	02:23	02 30W	+10 38	11	6-
47889	HD 217782	22 58.0	+42 13	02 33	03:35	00 25W	+42 32	Fe/-	13
47890	HD 3712	00 34.8	+55 59	03 39	03:50	00 56E	+56 39	11	13
47887	Spot Calib	for 47882-87,	89-90,		15 min	D1	17.5V 1sec 399V	1sec 430	13-1 4810

Spectr. Temp. 74°F Dome Temp./Hum. 71°F / 85% Transparency Conditions Fine ... Hazy ... 22

Focus 505

Spectr. Temp. 69 Dome Temp./Hum. 64°F / 96%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		4,4		DBL. Star cam	Tertiary		II-G		D.S./KIC	0.4, 30 spacing	
		4,4		"			Met		"	1.0, 2.5, 6.3, 04	
	2"	7,7		"			II-G		"	2.5, 6.3, 2.5	
20/91	2"	2	F	BC	1200/ -.025	B.S.	IIIa-eb	A	Asm sp		
20/101	2"	3.7	F0p	"	"	"	"	B	Asm sp		
20/90	2"	2.2	F0III	"	"	"	"	A	"		Fine
20/99	"	3.7	"	"	"	"	"	B	"		"
20/240	2-3"	4.2	K	"	*1200/.2	*150/.5	"	A	"	T = 72°F Set 505	NO comparison
20/50	2"	4.1	K	"	*1200/.2	150/.5	IIaE	B	"	70°F	NO comparison
20/120	2"	5.2	A2	"	1200/ -.025	B.S.	IIIa-eb	A	"	69 Set 505	Yes comp
20/93	2"	2.5	K0III	"	"	"	"	B	stuvel		
							"				

23 July

Date ~~Jun~~ 25-26/83 Observers Kly-Tn

5" 68° Emulsion Batches: IIa-O 09023-1307

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
47891F	Focus Test					0 0	+6013	Fe/-	
47891	α Boo HD124897	14 11.1	+19 42	20 30	20 41	02 21 W	+19 19	Fe/-	
47892	HD 137909	15 23.7	+29 27	20 49	21 08	01 35 W		Fe/-	
47893	HD 8890A	122.6	88 46	21 15	21 25	09 02 E	+89 10	H	
47893T	Spot Calib	for 47891, 94			15min @ D4	17.5V 3900	15V 3900	150 4100	
47894	HD 186711	1941.5	+10 22	21 36	00 30	00 40 W	+10 36		

Spectr. Temp. ...78°..... Dome Temp./Hum. 80F / 70% Transparency Conditions ..Sl. hazy.....2.4.

Focus .....504.....

Spectr. Temp. ...73°F..... Dome Temp./Hum. 69°F / 70%

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					BC	1200/-.025	BS	098e	A		T=78° set 504	Too good
	20/213	2"	1.2	KIII	"	1200/2	150/.5	IIa-eb	A	KK AsmSp		NO * comparison
	20/99	1-2"	3.7	FOp	"	1200/-.025	BS	"	B	"		
	20/102	"	2	F	"	"	"	"	A	"		
								"				
	20/211	2-3"	4.8	K	"	1200/.2	150/.5	"	B	"	Then 40 to 0, some clouds	NO comparison
											* but has comparison lamps!	
											darker min set?	
											focal plane?	

25 Tau-Tau JD 2435542.7

Date 2-4 25-71 1972 Observers Ke-Te

Emulsion Batches:
4" 68 098 02 05031 26013
IIIaJ cb 09023 13073
1" 69 IIaD-E 08102 - 15013

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
47895F	Focus Test					0h 0	+57°	Fe/-	2
47875	HD 5810=3 Cep	1h 22.6	+58° 4.4	20 21	20 27	9h 53 E	+57° 12	Fe/-	2
47876	HD 180582=HR 958	19h 12.0	+37° 45	20 48	23 07	0h 09E	+37 51		
47896T	Spot Calc for	47896-47906		15 min	15V D3				
47897	HD 192572	19h 20.2	+11° .4	23 10	23 27	0h 4W	+11° 55	Fe/-	2
47898	HD 159181=3 Dra	17h 23.2	+52° 03	23 32	2334	5h 4W	+52° 21	Fe/-	2
47899	HD 199093=8 Cyg	20h 18.6	+34° 56	23:40	23:43	0h 3.6E	+34° 13	Fe/-	2
47900	HD 195295=41 Cyg	20h 25.3	+30° 2	23:55	00 00	0h 2.1E	+30° 21	Fe/-	2
47901	HD 197572=χ Cyg	20h 38.5	+35° 14	00:04	00 [illegible]	0h 1W	+35° 53		
47902	HD 204867=β Aqr	21h 26.3	-6° 01	00:49	00:54	0h 3.2E	-5° 42	Fe/-	2
47903	HD 186057=ν Vul	19h 30.2	+25° 07	01 00	02 [illegible]2	3h 06 W	+25° 21		
47904	HD 198126=τ Vul	20h 47.2	+27° 52	02:48	03:06	2h 15W	+28° 13	Fe/-	2
47905	HD 201078=8 Cyg	21h 01.3	+36° 47.4	03:10	03:14	2h 21 W	+36° 10	Fe/-	2
47906	HD 213306=5 Cep	22h 25.4	+57° 54	03 35	03 44	1h 15 W	+58° 22	Fe/-	2
47907	HD 203156=HR 8157	21 15.4	+37 49	03 50	04 22	3h 04 W	+38 12	Fe/-	2

Spectr. Temp. ..80.5°F..... Dome Temp./Hum. 77°F/65% Transparency Conditions ..semi cloudy - hazy 26

Focus ...503.....

Spectr. Temp. ...72..... Dome Temp./Hum. 67°F/78%.....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	C98	A			ok
2/12		3.6	F2-	BC	1200/-	BS	J+Jc	B	Cyg/Eva	+1 blank	
1/	1	6.7	F6 I-II6	BC	1200/.7	RS	C98-07	A	Cyg/Eva	GG13 on Focus 503 Cloud	sl wk
							1				
1/160	2-3"	6.2 SP	F-IV MAG	"	"	"	"	B	Sltd vel	Spect 77°F	v. sl wk
20/50		G2II	V=2.9	"	"	"	"	A	Cyg/Eva		good
20/	1-2"	F II-	~3	"	"	"	"	B	Cyg/Eva	cloud	
20/		F5II	4.4	"	"	"	"	A	Cyg/Eva	cloud	good
1/	1-½"	F7Ia G2Ia	~1	"	"	"	"	B	Cyg/Eva	Spect 76°F 1"	
2/		G0Ia	1.8	"	"	"	"	A	Cyg/Eva Sltd		good
40/	1-2"	F8-Ia	~30			"	"	B	Cyg/Eva	more cloud	good
20/	1"	F-G	5.1-	"	"	"	"	A	Cyg/Eva	Spec 73°F Focus 504	good
40/	1"	F	6.1	"	"	"	"	B	Cyg/Eva		good
	1"							A	Cyg/Eva		
40/3	1"-2"	F2	6.2	"	1200/-.05	BS	[illegible]	B	Cyg/Eva	Focus 505	fair

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Date July 27-28, 1983 Wed-Thurs Observers Fla-Ri

Emulsion Batches:
IIaO-E 08102-15063
098 02 05031-24
8m68 sim 8/1-2 IIaO-E 08102-2

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
47908F	Focus Test					0h 00m	+17°	Fe/-	3-3
47908	HD 165174	17h 51m6	+1° 55'	20:24	20:34	1h 06m E	+1° 59'	Fe/-	4-4
47909	"	"	"	20:55	21:18	0h 43m E	"	"	4-4
47909T ✓	SPOT CAL FOR PLATES 47907-47913				15 MIN @ 150 VOLTS	① D4 3900	② D3 4300	③ D2 4810	
47910	HD 165174	17h 51m6	+1° 55'	21:19	21:41	0h 20m E	+1° 59'	Fe/-	4-4
47911	"	"	"	21:41	22:10	0h 09m W	"	"	4-4-4
47912	"	"	"	22:11	22:39	0h 39m W	"	"	4-4-4
47913	"	"	"	22:40	23:22	1h 20m W	"	"	4-4-4
47914	"	"	"	23:23	23:56	1h 55m W	"	"	4-4
47915	"	"	"	23:57	00:47	2h 47m W	"	"	4-4-4
47916	HD 23156 = HR 8157	2h 15m7	37° 49'	01:56	03:02	1h 47m W	+38° 11'		4-4-4

Spectr. Temp. ..8..F..... Dome Temp./Hum. 79°F/51%. Transparency Conditions clear:; partly cloudy: cloudy: Late

Focus ....503.....

Spectr. Temp. ..78..F..... Dome Temp./Hum. 70°F/79%.

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/.68	BS	098	A			
20/20		6.15		"	" / "	"	IIaO-E	B	Var-Bln		fine
20/60	2	"	"	"	" / "	"	"	A	"		"
					/		IIaO-E				"
80/80		"		"	830/.68	BS	"	B	Var-Bln	T=82°F	"
40/40		"	"	"	" / "	"	"	A	"		"
40/40		"	"	"	" / "	"	"	B	"		"
40/40		"	"	"	" / "	"	"	A	"	T=80°F; some cloud	"
40/40		"	"	"	" / "	"	IIaO*-E	B	"		
40/21		"	"	"	" / "	"	IIaO*-E	A	"	T=79°F; heavy at first some cloud	fine comp sl. str.
200/200		6.17	F2	"	" / "	"	IIaO*-E	A	Cepheid/Evans	T=76°F; Fine=5	"
					/						

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8m68

Emulsion Batches: Tao-E 08102-24073

Date Aug 1-2 Hou: TOE Observers Stg-R

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47917F	Focus TEST HD180968 2 Vwk							F_2/-	30-30
47917		19h13.5	22°51'	20:28	21:02	1h52 E	23°02	Fe/-	4-4-4
479177	SPOT CAL FOR PLATES 47914-479			15MIN@150VOLTS		⊙ D4 3900	⊙ D3 4300	⊙ D2 9310	
47918	HD180968	19h13.5	22°51'	21:04	21:38	1h16 E	23°02	Fe/-	4-4-4
47919	"	"	"	21:40	22:04	0h50 E	"	"	4-4-4
47920	"	"	"	22:08	22:33	0h21 E	"	"	4-4-4
47921	"	"	"	22:35	23:05	0h11 W	"	"	4-4-4
47922	"	"	"	23:07	23:40	0h46W	"	"	4-4-4
47923	"	"	"	23:47	00:16	01h22W	"	"	4-4-4
47924	"	"	"	00:22	00:51	01h57W	"	"	4-4-4
47925	"	"	"	00:56	01:24	02h30W	"	"	4-4-4
47926	"	"	"	01:29	01:56	03h02W	"	"	4-4-4
47927	"	"	"	02:00	02:30	03h36W	"	"	4-4-4
47928	"	"	"	02:34	03:29	04:36W	"	"	4-4-

Spectr. Temp. 76°F Dome Temp./Hum. 70°F 94% Transparency Conditions Good 30

Focus 504

Spectr. Temp. 68°F Dome Temp./Hum. 63°F 150%+

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/.68	BS	098-0	A			
30/80	4-5	5.45	B0.5Ve	"	830/.68	"	IIaO-E	B	Be-Stg	"B" FILTER IN Eq. MTR.	fine
							IIaO-E				
80/90	4-5	5.45	B0.5Ve	"	930/.68	"	IIaO-E	A	Be-Stg		v sl. str.
80/80	"	"	"	"	"	"	"	B	"	T: 74°F F: 504	v sl. str comp sl. str
80/80	3-4	"	"	"	"	"	"	A	"		"
80/80	"	"	"	"	"	"	"	B	"	T: 73°F F: 505	
80/90	4	"	"	"	"	"	"	A	"		
80/80	"	"	"	"	"	"	"	B	"		
80/90	"	"	"	"	"	"	"	A	"		fine.
80/80		"	"	"	"	"	"	B	"	T= 70°F F= 506	
80/80	3-4	"	"	"	"	"	"	A	"	MAY BE BLACK FORGET DARKSLIDE	light struck
80/80		"	"	"	"	"	"	B	"		
80/80	4	"	"	"	"	"	"	A	"	400 HUMP	fine
										100% INSIDE + OUTSIDE	

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Date Aug 28-29 TUES-WED Observers Stg-P.

Emulsion Batches:
IIaO E 08102-01083
IIaO Feb 09023-13073 25H
III aF Feb 09023-01083 25H

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47929F	FOCUS TEST							Fe/-	30-30
47929	HD180968	19h 13.5m	22° 51'	20:16	20:37	02h 14E	23° 03	Fe/-	4-4-4
47930	HD 180968	19 13.5	22° 51'	20:40	20:56	01h 55E	"	"	4-4-4
47931	"	"	"	20:58	21:14	01h 37E	"	"	4-4-4
47931T	SPOT CAL FOR PLATES 47929-33, 39-			15 MIN @ 15 VOLTS		① D4 3900	② P3 4300	③ D2 4810	
47932	HD180968	19 13.5	+22° 51'	21:16	21.31	01h 19E	+23° 03'	Fe/-	4-4-4
47933	"	"	"	21:33	21:53	00h 58E	"	Fe/-	4-4-4
47934	"	"	"	21:56	22.43	00h 06E	"	Fe/-	11-11-11
47935	"	"	"	22.45	23:29	00h 39W	"	Fe/-	11-11-11
47935T	SPOT CAL FOR PLATES 47934-36				15 MIN @ D4		① 17.5V 3900	② 15V 4300	③ 12.5 4900
47936	HD180968	19 13.5	+22° 51	23:31	00 12	01h 23W	"	Fe/-	11-11-11
47937	"	"	"	00:15	01:08	02h 18W	"	"	11-11-11
47937T	SPOT CAL FOR PLATES 47937-39				15 MIN @ D4		① 17.5V 3900	② 15V 4300	③ P5V 4810
47938	HD180968	19 13.5	+22° 51	01, 11	02:08	3h 18 W	+23° 03	Fe/-	11-11-11
47939	"	"	"	02:11	02:32	3h 43W	"	Fe/-	4-4-4

Spectr. Temp. 76° F ..... Dome Temp./Hum. 75°F 70% Transparency Conditions excellent 32...

Focus ..... 504 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/.680	B.S.	098	A			
20/40	2-3	5.45	B&S IIIe	B.C.	830/.680	B.S.	IIaO-E	B	Be-Stg		
20/40		5.45	"	"	"	"	"	A	"		
40/40		"	"	"	"	"	"	B	"		
							IIaO-E				
40/40		5.45	B&S IIIe	B.C.	830/.68	B.S.	"	A	Be - Stg.	q = 76°F	
40/40	2	"	"	"	"	"	"	B	"		
40/120		"	"	"	"	"	IIIaJeb	A	"		sl. str.
40/130		"	"	"	"	"	"	B	"		sl. str.
							"				
40/130	1-2	545	B&S IIIe	B.C.	830/.68	B.S.	"	A	"	q = 76°F	sl. str.
40/140		"	"	"	"	"	IIIaJeb*	B	"		
							"				
40/140		5.45	B&S IIIe	B.C.	830/.68	B.S.	IIIaJeb	A	"		sl. str.
40/40	2-3	"	"	"	"	"	IIaO-E	B	"	q = 74°F	

33 Pgt #2

Date Aug 2-3 TUES-WED. Observers STS - R.

8h 60 with following nights

Emulsion Batches: IIaO-E08102-01083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47940	HD 180968	19 13.5	+22°51	02:34	03:02	4h13W	23°03	Fe/-	4-4
47941	"	"	"	03:05	03:36	4h46W	"	Fe/-	4-4
47942	HD 203156	21 15.4	+37°49	03:45	04:24	3h33W	+38°13	Fe/-	4-4

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... ~~Excellent~~ 34

Focus .....

Spectr. Temp. ... 72°F ... Dome Temp./Hum. ... 68°F ... 82%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/37		5.45	B0.5 IIIe	B.C.	830/.68	B.5	IIaO-E	A	Bo-Stg		
40/40	3	"	"	"	"	"	"	B		9=73°F	
80/80	2-3	6.17	F2	"	"	"	"	A	Cep/Rm	9=72°F F=505	

35

Date ..... Observers Kly - Ri

5" 68°
8" 60°

Emulsion Batches:
~~Hi-Tc~~ 09023-01083 13m+025
~~Hi-E~~ 08102-01083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
47943F	FOCUS & REST							Fe/-	
47943	HD 889UA				20:51	0850 E	+89°10	Fe/-	20-
47944	HD 205331	21 29.5	+47 51	21:24	00:42	0011 E	+48°15	Fe/-	4 4
47944T	SPOT CAL FOR PLATES 47943, 45-48				15 MIN @	~~D4~~ 3900	② 17.50 ② 150	③ 150	
47944½	" " "	17904.			15 MIN @ 15V OLTS	② D4 3900	② D3 4300	③ D2 4810	
47945	HD 3712	0 34.8	+55°59	00:51	01:20	02:39 E	+56°29	Fe/-	16-10
47946	"	"	"	01:25	02:02	0158 E	"	Fe/-	19-1
47947	HD 217782	22 53.0	+42 13	02:10	03:32	0131 W	+42°42	Fe/-	19-1
47948	HD 217675	22 57.3	+41 47	03:57	04:25	0234 W	+42°16	Fe/-	19-

Spectr. Temp. ..... Dome Temp./Hum. ...76°F...85% Transparency Conditions Very Hazy & Unclear 3.6
Focus ..... 53 ..... Dr Night was on
Spectr. Temp. ..... Dome Temp./Hum. ...70°F...98%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	1200/ -.025	B.S.	[illegible]	A			
20/80	1-2"	~2	F	B.C.	1200/ -.025	B.S	IIIa-J	B	Asm-80-hk	T=	
800/801	2"	7	Am	"	830/.68	B.S.	IIaO-E	A	JBL Am +AP	T=78°F Set504	Fine
							IIIaF+6				
							IIaO-E				
40/120	2"	2.5	Kottk	B.C.	830/.68	B.S.	IIIaF+6	B	Std Vel	T=76°F Set 505	
40/760	"	"	"	"	1200/ -.025	"	"	A	"	T=75°F set 504	
/400	2"	5.2	A2	"	"	"	"	B	KK Asm sp		
-0/	"	3.6	B6p	"	"	"	"	A	"	T=73° set 505	

37 Tour 2.5kw

Date Sat-Sun. Aug 6/7, 83 Observers BK - RL

8m 68° with prism

Emulsion Batches:
J103E.08102-01083.
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
47949	HD182055	19 22.1	+19 11	23 29	01 52	3 10 W	+19°54	Fe/	4-4
47950	HD209603	22 00.2	+32 27	01 56	04 32	3 10 W	+32 55	Fe/	4-4
47950F	Focus 9.5							Fe/	3

Spectr. Temp. 80°F Dome Temp./Hum. 74°F 93% Transparency Conditions HAZY, SOME CLOUDS

Focus 503

Spectr. Temp. Dome Temp./Hum. 70°F 97%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/300	2	7.4	MO II	B.C.	83°/68	B.S.	IIaO E	A	WATERLOO		
100/300	2	7.5	3 I	"	"	"	"	B	"	CLOUDS } q = 77°F } T = 50↓	
				"	"	"	IIaO	A		q = 75°F T = 50↓	
									↑	IN LAST NIGHT	
										EXPOSED IIaO By	

39 Mon-Tues

Date Aug 8/9 Observers Wlh/RF

with next night 8m 68° Emulsion Batches:

Hen-E 08107-02083

4¾ 68° 098 05031-06083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
47951	V1016 Cyg	19 53·6	+39 54	21:00	23.02	00m 03s	+39°50	Fe -	4-4.4
47952	"	"	"	23:06	23:58	50m 43W	+39°50	T:/-	4-4-
47953	"	"	"	00:05	1h:55	02h 50W		Fe +HC /N	8-4
47954	"	"	"	02:58	02:45	03h 40W		Fe Fe/N	8 8
47954T1	SPOT CAL FOR PLATES	47951-52			15MIN@	1SVOLTS D3 150	D4 3900 D3 4300 D2 4900 D1 7U H2		
47954T2	" " "	"	47953-54.		15MIN@	980		D2 7U 5450	
47954T3	STEP CAL FOR PLATES	47951-52				60 sec.			

Spectr. Temp. 300F Dome Temp./Hum. Transparency Conditions photometric

Focus 503

Spectr. Temp. Dome Temp./Hum. 66°F 94%

40

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30 Filter 300/183	~5"	10.4	P[ ]	B.C.	330/.68	250/.5	IIaE	A	WL. U10 5"	Timed exposure 2 hr.	
300/98	~3"	"	"	"	"	"	"	B	"	T= 76°F 504 45m.	
00/200		"	"	"	1200/.7	250/.5	098	A	"	T= 75°F 505 2 hr.	emission only
00/86		"	"	"	"	"	098	B	"	T= 73°F F505	
							IIaE				
							098				

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Date Tues Wed Aug 9-10. Observers WR - Ri

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
	RETICON ENG			20:00	05:10				

Spectr. Focus Spectr. Exp. Mtr.

pectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..very good.....

ocus .....

pectr. Temp. ..... Dome Temp./Hum. .....

42

xp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		58	spectra								

43

Date Thu-Fri Aug 11-12/83 Observers ....K.ly.-.Ri.....

8" 68" Emulsion Batches: I.a.o. E 08102-02083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47955	+47° 3458	1900 now 21h 28.7	+47 5.4	22:21	02:24	01 55W	+48°18	Fe/-	4-44
47955T	STEP CAL FOR PLATES	47955-56			60 SEC.				
47956	HD 205073	21 ~~30.6~~ 27.8W	+48 ~~08~~ +47 55W	02:27	04:44	04 16W	+48°19	Fe/-	4-44
47956F	FOCUS 9 EST							Fe/-	2020

Spectr. Temp. 63°F Dome Temp./Hum. 60./93% Transparency Conditions ... good after it clear up

Focus 508

Spectr. Temp. 61° Dome Temp./Hum. 57°F 92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
with 3 plates											
600/800	34	8.7	AIV	B.C.	830/.68	B.S.	IIaO-E	A	IBLAm+Ap		good
							IIaO-E				
0/320		7.89	Am	B.C.	830/.68	B.S.	IIaO E	B	IBL Am+Ap	T=62° daylight F=508	good
				"	"	"	IIaO	A		9=61° F=508	

45

Date F.R.I. SAT. Aug. 12-13 Observers B.K-R.

Emulsion Batches:
8" 68° IIaD-E 08102-01083
8" 68° IIaO-E 08102-02083
8" 68° IIaO-E 15013-12083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47957	HD 146361	16 10·9	+34 07	19 56	20:22	1 15 W	+33 56	Fe/-	4-4
47958	HD 150118	16 33·9	+53 04	20 30	21 04	1 34 W	+53 00	Fe/-	4-4-4
47959	HD 150117	16 32·9	+53 09	21 06	21 18	1 48 W	+53 00	Fe/-	4-4-4
47960	HD 150100	16 32·8	+53 06	21 21	21 35	2 05 W	+53 00	Fe/-	4-4-4
47961	HD 165590	18 01·6	+21 26	21 42	00 06	2 09 W	+21 30	Fe/-	4-4-4
47961T	STEP CAL FOR PLATES 47958-61				60SEC				
47962	HD 192327	20 44·9	+52 03	0 10	1 54	2 15 W	+52 24	Fe/-	4-4-4
47963	HD 215573	22 39·6	+41 19	1 58	2 28	0 51 W	+41 45	Fe/-	4-4-4
47964	HD 218634	23 04·5	+8 08	2 31	3 31	1 30 W	+9 38	Fe/-	4-3
47965	HD 6288	0 58·7	+0 50	3 34	4 14	0 17 W	+1 19	Fe/-	4-4-4
47965T	STEP CAL FOR PLATES 47962-66.				60SEC				
47966	HD 11031	1 43·3	+47 24	4 12	4 44	0 02 W	+47 50	Fe/-	4-4-
47966F	FOCUS TEST							Fe/-	30-30

Spectr. Temp. ....720F..... Dome Temp./Hum. ..69°F....69% Transparency Conditions ...Good.....

Focus .....505.....

Spectr. Temp. ..... Dome Temp./Hum. 46

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B" FILTER											
20/100		6'20	F8 V	B.C.	830/.68	B.S.	IIaO E*	A	Waterloo		fine
30/100	2	6'58	A2	B.C.	830/.68	B.S.	IIaO-E**	B	"		fine
40/50		5'56	A2	B.C.	830/.68	B.S.	IIaO-E**	A	"	READJUSTED IRON ARC	fine
40/50		5'64	A0	B.C.	830/.68	B.S.	IIaO-E**	B	"		v.sl. str.
100/500		7'73	dG1	B.C.	830/.68	B.S.	IIaO-E**	A	"	θ=70°F F 506	fine
							IIaO-E**				
200/250	2-3	7'1	K0 IV	B.C.	830/.68	B.S.	IIaO-E	B	"		fine
40/50		6'1	K0 III	B.C.	830/.68	B.S.	IIaO-E	A	"	θ=66°F F 507	fine
20/20		6'6	M2 Iab	B.C.	830/.68	B.S.	IIaO-E	B	"		fine
30/100	3	6'4	A8 IV	B.C.	830/.68	B.S.	IIaO-E	A	"		fine
							IIaO-E			#67	
40/40		6'05	A2	B.C.	83/.68	B.S.	IIaO-E	B	"		fine
				B.C.	830/.68	B.S.	IIIaJ	A		θ=64°F θ=507	v.sl.blur

47

MON TUES

Date Aug 15-6 1993. Observers WA-R-SC

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	RETICON ENG			21:00	06.00				

Spectr.
Focus
Spectr.

Exp. Min

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... /....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

48

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality

49

Date ... Tue Wed Aug 16/17 ..... Observers ..Wh/SC/Ri.....

Emulsion Batches:
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.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Reticon Sky			23:00	05:00				

Spectr.
Focus
Spectr.
Exp. Mtr

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .... Hazy Some Filtered

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 68°F/96% 50

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality

51

Thu-Fri
Date Aug 18-19/83 Observers ...Kly-Ri.....

8m68° with nexr night

Emulsion Batches:
Tmax-E.08102-12083
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr.
47967F	FOCUS TEST							Fc/-	30-3	
47967	HD 205198	21h23m6	+48°12'	20:10	00:06	00:05W	+4837	Fc/-	4-4	
47567T	STEP CAL				60SEC					

Spectr.
Focus...
Spectr.

Spectr. Temp. ....77..... Dome Temp./Hum. ..71°/88%.... Transparency Conditions .....nice.....

Focus .....504.....

Spectr. Temp. ....73°F..... Dome Temp./Hum. 66°F/....100%

52

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B" FILTER U				B.C.	830/68	13.5	098	A		Set 504	
800/800	2-3	8.3	Am	B.C.	8301/.68	B.S.	IIaO-E	B	IBL Am+Ap		
							IIIaO-E				
										CLOSED UP	
										DOME DRIPPING	
										SO CLOSED UP	

53

Date FRI-SAT AUG. 19-20 1983 Observers HY.-R.

5m 68° Emulsion Batches: IIaJ-Tech 09023-01083 25Ha

8m 68° IIaD-Eastman 08102-12083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
47968F	FOCUS TEST							Fe/	40-
47968	HD 137909	15 23.7	+29°27	19:50	20:27	02h 33W	+29°13	Fe/-	19-
47969	HD 8840A	1h 22m.6	+8846	20:39	20:54	07 54E	+89°10	Fe/-	17-17
47970	HD 159561	17 30.3	+12°38	21'03	21.12	01 11W	+12°37	Fe/-	Fe/-
47970T	SPOT CHK FOR PLATES 47968-				15 MIN @ D4	① 17 JU 3900	② 15U 4300	3 15U	4810
47971	HD 8840B	1 22.6	+8846	21:35	00:35	9 15E	+89°10	Fe/-	4-4
47972	HD 206901	21 +0.1	+25 11	00:47	01:44	01 35W	+25°35	Fe/-	11-11
47973	HD 217782	22 58.0	+42 13	01:48	03:13	01 45W	+42°42	Fe/-	11-11
47974	HD 6582	01 01.6	+5426	03:25	03.46	00 13W	+54°53	Fe/-	6-6-
47975	HD 9138	01 24 9	+ 5 32	03:51	05:00	01 04W	+06°06	Fe/-	13-13

Spectr. Temp. 73°F Dome Temp./Hum. 76°F 64% Transparency Conditions ...hazy...but super...after 1 warm thru...
Focus 304 VERY WINDY first 1/2
Spectr. Temp. 76°F Dome Temp./Hum. 73F / 82% 54

Exp. Mtr. 13" FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	1200/-.025	B.S	098	A			v sl red
20/100	3-4	3.93	FOP	B.C.	1200/-.025	B.S.	IIIaJ+b	B	KK Asm Sp	Jarc - intruders	v sl. str.
20/101	3"	~2	F	"	"	"	"	A	"		strong
4/21	2"	~2	AIII	"	"	"	"	B	"	BROKEN 2 PIECES	foggy
							IIIaJ+b				
300/195	3"	8.6	F	BC	8301 .08	150µ/.3	IIaO-E	A	"		arc ghosts again
40/240	2"	4.4	F5III	B.C.	1200/-.025	B.S.	IIIaJ+b	B	"	9: 77°F 505	good
40/240	1½"	5.2	A2	B.C.	1200/-.025	B.S.	IIIaJ+b	A	"	Threatening BROKEN 2 PIE scored as I have since 20'	
40/50	1-2	5.8	GOVP	"	"	"	IIaO-E	B	"	BROKEN 2 PIECES	
40/90	2-3	5.1	X	B.C.	1200/-.025	B.S	IIIaJ+b	A	Std Vel	BROKEN	
										CHECKED PM.	
										BUT FOUND	
										NOTHING TO	
										CAUSE ALL THESE	
										BROKEN PLATES	
										KJ	

55

Date Aug 23/29 Observers Km-Ki

Emulsion Batches:
103aF 08102–12083
098-02 05031–22093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47976 =	Focus Test							Fe/—	
47976	HD 8890 = β Hyi	1h 25.6	+73° 46.9	19:46	19:52	8h 39m E	+87° 03	Fe/—	9
47977	HD 13344 = V Hyi	1h 54.0	−71° 15.0	20:11	22:11	0h 33m	−71° 04	Fe/—	4 44
47978	HD 187421 = 51 Vul	19h 47.4	+27° 12	22° 27	00 17	2h 17m W	+27° 25	Fe/HD 10	2 3 2
47979	Spot Cal for 47978		15 mm	15V D3 9810	7V D1 HX	7V D1 5.9			
47981	HD 188727 = 5 Sge	19h 51.5	+16° 22	00 23	00:46	2h 40m W	+16° 35	Fe/HD	12 7
47980	HD 197092 = 6 Cyg	20h 18.0	+39° 56	00 43	00:50	2h 19m W	+40° 12	Fe/HD	12 12
47981	HD 195295 = 91 Cyg	20h 05.3	+30° 2	00 54	00 59	2h 20m W	+30 26	Fe/HD	12-12
47982	HD 204867 = β Aqr	21h 26.3	−6° 1′	01 03	01 06	1h 22m W	−5° 42	Fe/HD	12-12
47983	HD 209750 = ν Aqr	22h 0.6	−0° 48	01 11	01 14	1h 00m W	−0° 33	Fe/HD	12-12
47984	HD 222368	23h 34.8	+5° 05	01 18	01 25	0h 34m E	+05 33	Fe/HD	12-12
47985	HD 197672 = χ Cyg	20 ~~42.7~~ 39.5	+35° 19	01 30	2 15	3h 33m W	+35° 33	Fe/HD	12-12
47986	HD 198726 = T Vul	20h 47.2	+27° 52	02 19	3 08	4h 07m W	+28 11	Fe/HD	12-12
47987	Focus							Fe/—	12 12

Spectr. Temp. ...74°F..... Dome Temp./Hum. ..71°F....62% Transparency Conditions .Same...Clouds...At.....
Focus .....505..... THE BEGINNING OF
Spectr. Temp. ..... Dome Temp./Hum. ..63°F....80% THE NIGHT and after the

56

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/-.025	BS	098	A			
40/51		2.5-2.6	FTb	BC	1200/-.025	BS	IIaoE	B	Ceph/Evans	74° spec - focus 505	
20/400	2.3	7.9	FSII	BC	830/.68	BS	IIaoE	B	Ceph/Evans	B-[illegible] & Eyepiece [illegible]	
30/832		~8.2	FTb	BC	1200/.7	RS	098-E	A	Ceph/Evans	GG13 in B&T; 5124 - Eyepiece spec 73°F cloud	
							098E				
20/40		5.9	FTb	"	"	"	"	A	Ceph/Evans	spect T 71°F focus 506	
20/5		3	FSTb	"	"	"	"	B	"		
2/7		4.4	FSII	"	"	"	"	A	"		
2/6		3.7	GSTb	"	"	"	"	B	" /std vel		
2/8		3.4	GZTb	"	"	"	"	A			
4/16		4.6	FTI	"	"	"	"	B	std vel		
20/80		~7	FTI-IIaO	"	"	"	"	A	Ceph/Evans	spec 70°	
120/2-1		~6.5	~FSTb	"	"	"	"	B	"	spec 69° focus 507	
				"	"	"	"	A		68°F T= 507	sl red

57

Date Aug 24-25/83 Wed Thurs Observers Tn-Kly

4½ᵐ 70° Emulsion Batches: IIIaJ-86 09223-14

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47987F	Focus Test					0 10W	+30°	Fe/-	40-4
47987	HD 137909	15 23.7	+29 27	19 44	20 14	02 40W	+29 11	Fe/-	19-16
47988	HD 159561	17 30.3	+12 38	20 17	20 24	00 44W	+12 36	Fe/-	19-19
47989	HD 8890A	1 22.6	88 46	20 32	20 43	07 47E	+89 10	Fe/-	19-19
47990	HD 182640	19 20.5	+2 55	20 50	21 12	00 19E	+3 06	Fe/-	19-19
47991	HD 196524	20 32.9	+14 15	21 15	21 43	01 00E	+14 34	"	19-19
47992	HD 206901	21 40.1	+25 11	21 45	22 28	01 22E	+25 35	"	19-19
47993	Spot Calib for 47987-9A			15 min @ 04	17.5V 3900	15V 4300	15V 4810		
47993	HD 217675	22 57.3	+41 47	22 31	22 47	02 20E	+42 14	Fe/-	19-19
47994	HD 217782	22 58.0	+42 13	22 52	00 00	01 06E	+42 41	Fe/-	19-19

Spectr. Temp. ...72.5°F..... Dome Temp./Hum. 62°F/...79%... Transparency Conditions ...Fine, Wl. Obs.....

Focus ....506.....

Spectr. Temp. ...68°F..... Dome Temp./Hum. 62°/.....

58

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4-				BC	1200/-035	BS	098	A		Blue Emission Lines in	
20/90	3"	3.93	F6p	"	"	"	Bal-e	B	Asm Sp: KK		Fine
20/88	2"	2.2	A5III	"	"	"	"	A	"		Fine
20/92	2-3	2	F	"	"	"	"	B	Polaris		
20/90	"	3.7	F0IV	"	"	"	"	A	Asm Sp: KK		Fine
20/97	2"	3.78	F6IV	"	"	"	"	B	"		Fine
20/98	2"	4.4	F5IV	"	"	"	"	A	"	T=72°F	Fine
							"				
20/90	2"	3.6	B6p	"	"	"		B	"		Fine
20/100	"	5.2	A2	"	"	"		A	"	some cloud -> cloudy	Fine

59 Thurs-Fri

Date . Aug. 25-26. 1.83 ... Observers .. Tn - K.L.y .....

5m 69° Emulsion Batches:
IIIa-J-eb 09023-24083 22Apr83 H2
IIa-E ... 15913-12083
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
47995	HD 159561	17 30.3	+12 38	19 34	19 46	00 10W	+12 36	I-J	≈19
47996	HD 88909	1 22.6	+88 46	19 57	20 12	08 13E	+89 09	"	19-M
47997	HD 205085	21 27.9	+47 50	20 24	00 03	0029W	+48 12	"	4-4-4
47997T	Calib Step wedge for 47997				60secs				
47998T	Spot Calib for 47995, 96, 98-99				15 min @ DA	17.5V 3900	15V 4300	15V 4810	
47998	HD 6961	0105.0	+54 37	00 10	0102	0205E	+55 04	I-J	M-M
47999	HD 6582	0106.6 / 01 01.6	+54 26	01 07	0327	0058W	+54 57	I-J	M-M

Spectr. Temp. ..75°F..... Dome Temp./Hum. 70°F / 88% H Transparency Conditions ..hazy - cloudy.....

Focus ....505.....

Spectr. Temp. ...69..... Dome Temp./Hum 66°F / 100% + Fog at end 60

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/95	1½'	2.2	AS III	BC	1200/-.025	BS	IIIaJ-eb	A	Asm Sp KK		good
c/88	"	2	F	"	"	"	"	A	Polaris		fine
500/882	"	8	Am	"	830/68	"	IIaO-e	B	IBL AmtAp	end broken off cloud by 400 comas	NO COMP
							IIaO-e				
							IIIaJ-eb				
1-0/244	1"2'	4.5	ATV	"	1200/ -.025	BS	"	A	KK Asm Sp		NO COMP!
40/340	1"	5.5	GSp	"	"	"	"	B	"	cloud/fog	NO COMP!

61 Fri/Sat

Date Aug 26/27, 1983 Observers Bk - Tn

Emulsion Batches:
8" 68° IIa-O-E 15013 — 22083
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48000	HD 167013	18 42.6	+33 30	21 45	22 14	0 30W	+33 42	Fe/—	4-4-4
48001	HD 198287	20 44.9	+52 03	22 18	00 27	0 42 W	+52 24	"	4-4-4
48001T	Step Calib	for 48000 - 48004		60 sec					
48002	HD 216277	22 47.5	+42 47	00 30	01 99	1 00 W	+43 14	Fe/—	4-4-4
48003	HD 11031	1 43.3	+47 24	01 53	02 40	1 10 E	+47 50	Fe/—	4-4-2
48004	HD 7710	1 11.8	+48 29	02 44	03 48	0 30W	+48 57	"	2-7-4

Spectr. Temp. ..79°F..... Dome Temp./Hum. 75°F/92% Transparency Conditions ..hazy...cloudy.....

Focus ....503.....

Spectr. Temp. ..74°F..... Dome Temp./Hum. 72°/100% 62

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B filter +0/50	1"	5'5	F5 V	BC	830/.68	BS	IIaO-E	A	Meteor Spec	2" missing [illegible] found	N
400/510	1"	7:1	K0 IV	"	"	"	"	B	" "	broken 2 pcs found	0
							"				C
400/500	<1"	6'5	M0 III	BC	830/.68	BS	"	A	Meteor Spec	1/2" hole off ctr set 564	0
400/500	<1"	6'0	A2	"	"	"	"	B	"	"	M
400/480	"	6'8	A0	"	"	"	"	A	"	Clear!! broken (2 pcs together)	P

63

Mon/Tues

Date AUG. 29/30 ...1983 Observers ..Kly.:...Tn.....

Spec 2 Ri 4½ 68 Emulsion Batches: IIIaJ-E ...09023 - 2[illegible] H2

8m65 ..IIaD-E..15013 - 22083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48005	HD 8890 A	1 22.6	+8846	20:10	20:23	1 8 00E		Fe/-	19-19
48006	HD 197989	20 42.2	+ 3336	20:38	21:00	01 33E	+33 54	Fe/-	19-19
48007	HD 195987	20 [illegible]	+71 32	21:11	00 32	02 13W	+41 52	Fe/-	44-44
48007T	Stop Calib	for 48007-8			60sec				
48006T	Stop Calib	for 48005-06			180 sec				
48005	HD 189215 = DM+53	2 57.6	+53 07	00 51	01 15	3 34E	+53 28	Fe/- Wratten	6-5

Spectr. Temp. ....79..... Dome Temp./Hum. ..77°/..73.%.. Transparency Conditions ..sem. cloudy.....

Focus .....504.....

Spectr. Temp. ..75..... Dome Temp./Hum. ..71.5°/..95.%

64

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1-172 *	1 2	2	F	B.C.	1200/ -.025	B.S.	IIIaj-eb	A	Polaris	Timed 13 min. Exp met. out now on	sl. str.
2-/103	1"	3.6	K0III	"	"	"	"	A	KK Asm Sp		v sl. str.
3cc/8.0	1"	7.8	G9V	"	830/ .68	"	IIaO-e	B	"	Clouds ~10 min T=79 Set 504	comp yes
							"				
							IIIaJ-eL				smudged
4/38	2"	3.63	G8III	RC	1200/.2	150/5	IIaO-e	A	Asm Sp	clouds T=75	NO comp.

65 Wed - Thurs Sept 2 R. B 68

Emulsion Batches: H.o.E. 15013 - 22083

Date Aug 31 - Sept 1/83 Observers T.A. - K.L.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48009	HD 186791	19 41.5	+10 22	19 30	19 42	01 43E	+10 37	IC/—	≈6 - 8
48010	HD 205085	21 27.9	+47 50	19 49	22 17	00 53E	+48 14	I-/	4-4-4
48011	HD +47°3472	21 30.3??	+48 15	22 23	02 09	03 02W	+	11	4-4-4
48011T	Strip Cal's for	48009-13				60secs			
48012	HD 221264	23 25.5	+30 18	02 14	04 04	03 58W	+30 45	IC/—	4-4-4
48013*	HD 1835	2 57 6	+53 07	04 18	04 37	00 03E	+53 26	F+NY WG	6-6

Spectr. Temp. ..76°F..... Dome Temp./Hum. 71°F / 75% Transparency Conditions ..Fine.....

Focus .....504.....

Spectr. Temp. ..67..... Dome Temp./Hum. 60°F / 85% 66

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/37	2"	4.1	KB II	RC	830/68	RS	IIaO-E	A	Std Lum		
00/425	2.3"	8.0	Am	"	"	"	"	B	JBL Am+Ap		
30/811	2"	9.2	Am	"	"	"	"	A	"	1 piece dewar window broken 2 pcs saved (clear in hur)	
							"				
00/399	2-3"	7.7	F5	RC	830/68	RS	"	B	Am Sp	T=68°F Set 507	
10/152	2-3"	3.63	G83	"	1200/12 *	150μ/15	"	A	"		fine comp sl. str-

67 Thurs-Fri

Date Sept. 1-2-1883 Observers T.h.-K.s

Emulsion Batches: Scan 2 { R. 4½ 68 IIIa-J-ab 09073-01093 19 27 24 hrs
R. 8 68 IIa-D-E 15013-29083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
48014	HD 8890A	01 22.6	+88 46	19 32	19 44	38 0E	+89 04	Fe/-	18-1
48014T	Spot Calc	for 48014,15, 48018-20		15 min @ D4		17V 3330	15V 1330	1-V 4610	
45015	HD 196524	20 32.9	+14 15	19 51	20 11	0200E	+14 36	Fe/-	19-1
48016	+47 3472	21 30.3	+48 15	20 24	00 37	01 30W	+48 22	Fe/-	4-4
45017	HD 221264	23 25.5	+30 18	00 43	02 05	01 04W	+30 47	Fe/-	4-4
45015	HD 219080	23 08.0	+48 51	02 15	02 52	0205W	+49 20	Fe/-	12-1
48019	HD 29316	4 32.0	+53 17	07 58	04 17	01 55E	+48 29	Fe/-	19-1
48016T	Stop Calc	for 48016,17			60 secs				
48020	HD 18925	2 57.6	+53 07	04 25	05 10	0033W	+53 28	Fe/V	19-

Spectr. Temp. 7747 Dome Temp./Hum. 72°F/64% Transparency Conditions . hazy : later v. much...

Focus 5.05

Spectr. Temp. ..... Dome Temp./Hum. 76°F/97%

68

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/90	2"	2	F	BC	1200/-.025	BS	IIIaJ-eb	A	Asm Sp	broken / pc sand	
							IIaO-eb				
20/100	1"	3.8	FSIV	"	1200/-.025	BS	IIIaJ-eb	B	Asm Sp		good but sl. uneven exp ok sl. flex.
800/811	1"	9.3	Am	"	830/.68	"	IIaO-e	A	IBL AmAp		
400/409	2"	7.7	F5	"	"	"	"	B	Asm Sp	q=70	
20/109	1"	4.9	F0IV	"	1200/-.025	"	IIIaJ-eb	A	"		fine
40/202	2"	5.8	ASn	"	"	"	"	B	"		v sl weak
							IIaO-E				
20/200	2"	3.6	G8III	"	1200/.2	150μ/15	IIIaJ-eb	A	"		fine

69 WED-THURS

Date SEPT. 7-8 1983 Observers L.Y.-R.

Emulsion Batches:
IIIa-J 6 09023-01093
IIa-E 15013-29083

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
48021F	Focus Test							Fe/-	30 s
48021	HD 186791	19 41.5	+10°22	19:33	20:08	00H49E	10°36	Fe/-	19-1
48022	HD181391	19 15.2	-05 36	20 16	22:18	01 46W	-05 27	Fe/-	7-14
48023	HD175426	18 50.2	+36 51	22:22	22:41	02 37W	+37 00	Fe/-	7-7
48024	HD1337	00 12.4	+50 53	22:48	23.27	02 01E	+51 23	"/-	7-7
48025	HD 1337	00 12.4	+50 53	23:28	23:56	01 31E	"	Fe/-	10-1
48026	HD352	00 03.1	-03 00	00 06	02 11	00 54W	-02 33	Fe/-	7-7
48026?	STEP CAL'N FOR PLATES 48022-26,					60 SEC			
48027	HD8290A	01 22.6	+88 46	02 21	02 27	01 05E	+89°13	Fe/-	19-

Spectr. Temp. ...74°F..... Dome Temp./Hum. ..68°F....72% Transparency Conditions ...V. Good.....

Focus .....505.....

Spectr. Temp. ...69°F..... Dome Temp./Hum. ..60°F....94% 75

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B FILTER				B.C.	1200/-.025	B.S.	IIaTeb	A			cont/vs/Rel
40/200		4.1	K3III	B.C.	1200/-.025	B.S.	IIaTeb	B	std vel		S/ST
40/150	4	~6	G8III-IV	"	"	"	IIIa-Oe	B	H+K - Ly		Fine
40/50	2-3	5.5	B2V	"	"	"	"	A	Spec - Ly	69°F set 500	s/wk
40/50	3-5	6.0	O9III	"	"	"	"	B	MSB - Ly		S/wk
40/51		6.0	O9III	"	-	"	-	A	-		S/wk
200/190	3-5	7.3	gK2	"	"	"	"	B	Wuma - Ly	67°F set 507	wk
20/84		~2	F	B.C.	1200/-.025	B.S.	IIIaTeb	A	Asm Hk	9=69°F S/	ST

71

Date THURS FRI SAT 8-9 Observers Ly - Ri

Emulsion Batches:
IIaF 6 09023-01093 30 296
IIaO-E 15013-29083
IIaO-E 15013-08093 10,178

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48028	HD8890A	01 22.6	+88 46	19 14	19 17	08 10E	+89 12	Fe/-	19-19
48029	HD219634	23 12.2	+61 25	19 07	20 00	04 24E	+61°53	Fe/-	7-77
48030	"	"	"	20 02	20 39	03:45E	+61°53	Fe/-	7-77
48031	"	"	"	20:40	21 16	03:07E	+61°53	Fe/-	77
48032	HD1337	00 12.4	+50 53	21:26	21 45	03 40E	+51 2f	Fe/-	7-7-7
48033	"	"	"	21:46	22:04	03 20E	"	Fe/-	7-7-7
48034	"	"	"	22:06	23:15	02 10E	"	Fe/-	12-12
48035	HD16823	02 37.4	+67 23	23:37	02:37	01 14E	+67 47	Fe/-	44-4
48035T1	SPOT CAL FOR PLATES 48028-34				15MIN @ D4	① 17.4 3900	② 15U 4300	③ 15U 4910	
48035T2	STRIP CAL	FOR 48029-31+35			60SEC				
48035T3	STRIP CAL	FOR 48032, 33, 36, 37,				60SEC			
48036	HD9746	01 30.3	+48 12	02:45	04:33	01 51W	+48 41	Fe/-	77
48036T1	STRIP CAL	TIaO-E TEST	60SEC						
48036T2	SPOT CAL	TIaO-E TEST			15MIN @ D4	① 12.5U 3900	② 15U 4300	③ 15U 4910	
48037	HD3712	00 34.8	+55 59	04:39	04 44	02 57	+56 29	Fe/-	11-11
48037F	filter				-	"	"	Fe/-	30-30

Spectr. Temp. 74°F Dome Temp./Hum. 70°F 76% Transparency Conditions .. good at start 72
Focus 505 -then at beg after midnight Wt.
Spectr. Temp. 66°F Dome Temp./Hum. 60°F 98% -last very hazy (=thick low

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
*B = Forest											
10/41	1-2	2	F	BC	1200/.025	BS	IIIaJ+cb	A	Asm-KK		Fo str S/str
40/50	2	6.5	B8	"	"	"	IIaO-E*	B	Sp Bi-Ly		vs/wk
40/50	"	"	"	"	"	"	"	A	"	T=74°F	wk
40/50	"	"	"	"	"	"	"	B	"	BROKEN 4 PIECES	some doubling S/wk
40/52	"	6.0	09III	"	"	"	"	A	Sp Bi-Ly		vs/wk
40/52	"	"	"	"	"	"	"	B	"	T=73°F	vs/wk
40/200	"	"	"	"	"	"	IIIaJ+cb	A	"		Fine
400/232		8.9	12V	BC	830/.68	"	IIaO*	B	Sp Bi-Tnr	R. tried to fix ave during exposure T=71° F 505	WK Fe wk
							IIIa-Tob				
							IIaO-E*				
							IIaO-E			BROKEN 2 PIECES	
30/120	2	7.1	gK1	BC	1200/.025	BS	"	A	H+K-Ly	T=67°F F=507	Fe wk
							IIaO-E				
							IIIaJ-E				
13/13		8.8	K0III	BC	1200/.025	BS	IIaD+c	B	Std Wd		Fo wk Fine
				"	"	"	IIIaJ+c	A		T=66°F F=507	VVVVwk

73 Tues/Wed Sept 13/14 1983

Date ..... Observers Ly-R.

Emulsion Batches:

8" 48F Tech E 15013-08093

12" 48F Tech E 09023-01093 28 30S

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48038	HD 181391	19 15.2	-05 36	19 47	22 42	02 35W	-05 28	Fe/-	7-7
43039	HD 1337	0 12.4	+50 53	22 51	23 37	01 27E	+51°19	Fe/-	7-7-7
48040	HD 1337	"	"	23 38	00 17	00 47E	"	Fe/-	7-7-7
48041	HD 1337	"	"	00 18	00 54	00 10E	"	Fe/-	7-7-7
48042	HD 9746	01 30 3	+48 12	00 59	02 59	00 36W	+48°37	Fe/-	7-7-7
48042T	STRIP CAL'N FOR PLATES 48038-42, 45.					60 SEC			
48043	HD3712	00 34.8	+55 59	03 02	03 15	01 49W	+56 25	Fe/-	19-19
48044	HD8890A	01 22.6	+88 46	03 20	03 28	00 21W	+89 12	Fe/-	19-
48044T	SPOT CAL'N FOR PLATES 43043-44					15M N@ D4		0 17 SU 15 3900	3 15U 3 SU 4300 4800
48045	HD28911	04 28.2	+13 02	03 34	05 16	00 02E	+13 13	Fe/-	7-7-7
43045F	FOCUS SET					00 02E	+13 13	Fe/-	30-30

Spectr. Temp. ....65°F..... Dome Temp./Hum. ...59°F...63% Transparency Conditions ..clouds at first then good...

Focus .....508.....

Spectr. Temp. ..... Dome Temp./Hum. ...48°F...85%

74

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/150 B FILTER	3-5	~6	G8III	BC	1200/-.025	B.S	IIaO e	A	H+K-Ly	clouds SOME	Fine
40/60		6.1	O9III	"	"	"	"	B	SpBi-Ty	T=61°F BROKEN 2 PIECES	Fine Foggy
40/81	4-5	"	"	"	"	"	"	A	"		Fine
40/82		"	"	"	"	"	"	B	"	T=59°F F=509	Fine
30/180	3-4	7.1	gk1	"	"	"	"	A	"		Fine
							"				
4/20		2.5	KOIII	BC	1200/-.021	B.S	IIIaFab	B	std vd.	blue end of plate totally out of focus ← poor	
4/20		2	F	"	"	"	"	A	Am-kK.	T=56°F	Fe sl wk Fine
							"				
50/170	3	7.0	F5V	BC	1200/-.025	B.S	IIaO e	B	Hyades-Ly	BROKEN ½" MISSING	sl wk
							IIIaFab	A		T=54°F F=509	

75 Pg 01 Sept 14/15 JD 4105926

Date Wed/Thurs Observers Bue Tu / J Tu

Emulsion Batches:
A-69 IIIa-J fg 09023 - 12093
A-69 098-01 E 20081 - 12093 31 220
IIa-O E 15013 - 08093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
[illegible]	HD 8890 = χ Uma	1h 22.6	+38° 46.9	19:09	19 18	7 49 E	+89 08	[illegible]	[illegible]
[illegible]	HD 189181 = β Dra	17h 20.2	52° 23	19.32	19 34	1h 26 W	[illegible]	[illegible]	[illegible]
[illegible]	HD 185758 = κ Sge	19h 35.6	+17° 47	19:39	19 50	0h 33 E	+18° 59	[illegible]	[illegible]
[illegible]	HD 202108 = 50 Cyg	21h 2.7	+29° 49	14.54	19 57	2h 00 E	[illegible]	[illegible]	[illegible]
48050	HD 177389 = 73 Her	19h 03.2	+01° 08	20.02	21.41	1h 49 W	[illegible]	[illegible]	[illegible]
[illegible]	Spec Cal fr 4047-56		15	15V B3	7V B3	7h B3			
48051	HD [illegible] Sge	19h 51.5	+19° 22	21 27	22 57	1h 42 W	[illegible]	[illegible]	[illegible]
[illegible]	HD 206267 = [illegible]	21h [illegible]	−6° 1	22 32	22 34	0h 20 W	−5° 50	[illegible]	[illegible]
48053	HD [illegible] = [illegible]	[illegible]	[illegible]	[illegible]	22 42	0h 15 W	[illegible]	[illegible]	[illegible]
48054	HD 209780 = κ Aqr	22h 04m	[illegible]	22 35	22 40	0 00	[illegible]	[illegible]	[illegible]
48055	HD 223047 = ψ Aqr	23 41.1	+15° 52	22:53	23 08	1h 30 E	[illegible]	[illegible]	[illegible]
48056	HD 224465 = HR 9053	23h [illegible]	[illegible]	23 01	23 23	1h 14 E	+47° 15	[illegible]	[illegible]
48057	HD 215648 = ζ Cep	[illegible]	[illegible]	[illegible]	[illegible] 41	0 19 W	[illegible]	[illegible]	[illegible]
48058	HD [illegible] = HR 8703	21 15.4	+37 49	23:52	00 09	2h 6 W	+38° 10	Fe/-	6-6
48059	HD 16893	02 37.4	+67 23	00 30	03 52	0 25 W	+67 44	Fe/-	5-4

Spectr. Temp. ..63°F..... Dome Temp./Hum. 60°F / H=70% Transparency Conditions .s.l. hazy.....

Focus ...509.....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

76

Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/100	2"	2	F	BC	1200/-.025	RS	IIIa-J fg	A			fine
/16	1	V=2.9	GIII	BC	1200/.7	RS	098E	B	Cyph/Evans	[illegible]	fine
/60	2-3"	B-C3	GOII	"	"	"	"	A	"		fine
/35	"	4.2	GoII	"	"	"	"	B	"		fine
20/350	3"-4"			"	"	"	"	A	"		v sl wk
							098E				
1:1	2-3	C3-7	[illegible]	BC	1200/.7	RS	098-E	B	Cyph-Fan	spec T 60°F	good
/31		3.7	GoIb	"	"	"	"	A	" / Silvel		good
/32		V=4"	GoIb	"	"	"	"	B	Cyp/Evans		good
/27		B=3.9	GoIb	"	"	"	"	A	"		good
/30		V=5.0	GoIb	"	"	"		B			fine
/30	2	3-7	GIIb	"	"	"	"	A	"		fine
/[illegible]		B=5.2	GIIb	"	"	"		B	"	T=58.5°F short plate	good
/26	2 3/4"	B=[illegible]	F2	"	[illegible]	RS	[illegible]	A		Bright Lagoon Nebula	Fine
400/352	2"	8.92	A2I	"	"	"	"	B	SB Tur		Fine
										over	

77 Pg #2

Date Cont of Sept 14/15 Observers T.H.

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48058T	Strip Calib for	48058-60				60 secs			
48060	HD28911	04 28.2	+13 02	04 04	05 22	0 07W	+13 14	Fel-	65-
48059F	Focus Test					"	"	Fel-	

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ..... 510 .....

Spectr. Temp. ..53.5°F..... Dome Temp./Hum. 48°F/90% 78

Comparison Filter	Comparison Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
									IIaO-E				OK
		200/250	3-4"	7.0	FSV	BC	1200/-025	BS	IIaO-E	A	Hyda-Ly	α 1993 04 32.9 + 13 13 set 510 T=54°F	Fine
						"	"	"	098	B		"	

79 Fri-Sat

Date Sept. 23-24/83 Observers ...Tn-Ly/Tn...+some KK

Emulsion Batches: 5" 68° DG IIa-J-E fg 31023 - 12093 22275 22276
IIa-O-E 15013 - 08093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48061	HD 186791	19 41.5	+10 22	18 44	19 26	00 27 E	+10 35	Fe/-	17-17
48062	HD 181391.	19 15.2	-05 36	19 30	21 37	02 10 W	-05 27	Fe/-	4-4
48062T	Stnp Calc for	48062,		60secs					
48063	HD 1337	00 12.4	+50 53	21 43	23 53	00 30 E	+51 21	Fe/-	3-10-1½
48063T	Spot Calc	for 48061, 63, 64, 65		15min @ D4		17.5V 3900	15V 4300	15V 4300	
48064	HD 217675	22 57.3	+41 47	23 58	00 14	01 05 W	+42 12	Fe/-	17-17
48065	HD 21790	03 25.7	-5 25	00 20	01 22	02 15 E	-5 08	"	17-4
48065F	Focus test					"	"	"	

Spectr. Temp. 55°F ..... Dome Temp./Hum. 48°F / 80% Transparency Conditions Fine .....

Focus ... 5.1.0 .....

Spectr. Temp. 42°F ..... Dome Temp./Hum. 40°F / 100% + very wet

80

Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/103	3-3	4.1	K3 II	PC	1200/.025	BS	IIIa J-E fg	A	stellar		fine
10/155	"	6	G8 III-IV	"	"	"	IIa O-E	B	HSK-Ly	Set 511 53°F	fine sl. fog
							IIa O-E				
10/210	4"	6.0	O9 V	BC	1200/.025	BS	IIIa J-E fg	A	MSB-Ly		good comp sl weak
							"				
20/120	4"	3.6	B6p	BC	1200/.025	BS	IIIa J-E fg	B	Asm Sp	T=49°F 0.91	fine comp sl weak
20/215	4"	4.63	B8V	"	"	"	"	A	SB-Ly		fine
				"	"	"	?	B		T=45°F Set 511	ok

81 Mon-Tues

Date Sept. 26-27. 1983 Observers Tm

Emulsion Batches: IIaJ-Eg 09013-12093 37 225

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
42066	HD 181391	19 15.2	-05 36	18 59	20 57	1 41 W	-5 25	Fe/-	11-11-11
42066T	Spot Calib for 42066, 67, 68, 71-73.				15 min @ 04	1754 3900	15V 4300	15V 4210	

Spectr. Temp. 63°F Dome Temp./Hum. 62°F / 80% Transparency Conditions Sl. hazy x-ray

Focus 509

Spectr. Temp. Dome Temp./Hum. 60°F / 92% 82

Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/210 *	<1-3	26	58II-III	RC	1200/.025	BS	IIIaJ Eq II	A	Hsk-Ly * Butt of Exp before 20hrs	Thin cloud @1940-2010	weak

83 Tues-Wed

Date Sept 27-28, 83 Observers Ly-Tu

Emulsion Batches:
IIa-J Eg 09023-12093
8mm IIa-E 15013-24093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48067	HD1337	00 12.4	+50 53	18 46	20 18	03 51E	+51 19	Fe/-	11-11-
48068	HD219634	23 12.2	+61 25	20 22	22 45	00 22E	+61 52	Fe/-	11-11-
48069	HD16893	02 37.4	+67 23	22 54	01 57	00 37E	+67 45	Fe/-	5-5-
48070	HD9746	01 30.3	+48 12	02 07	05 07	03 41W	+48 38	Fe/-	6-6-
48070T	Strip Calib for	48069-70		60sec					
48071	HD37043	05 30.5	-05 59	05 15	05 21	00 05E	-05 55	Fe/-	18-18
48072	HD36486	05 26.9	-00 22	05 24	05 28	00 05W	-00 20	11	18-18
48073	HD18884	02 57.1	+03 42	05 31	05 45	02 54W	04 02	Fe/-	18-18

Spectr. Temp. 64°F Dome Temp./Hum. +62°F/90% Transparency Conditions hazy

Focus 508

Spectr. Temp. 58°F Dome Temp./Hum. 52°F/96% was 100% + earlier

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/450	1"	6.0	09 III	BC	1200/.025	BS	IIIaJe	A	MSB-Ly	(was intd as 48061)	? few wk wk
30/450	1"	6.5	B8	"	"	"	"	B	SB-Ly	62°F at end.	sl weak comp weak
400/357	2"	892	A2 V	"	830/.68	"	IIIaO e	A	SB-Tnr	62°F Set 508 (same)	sl wk comp sl wk
600/440+	2"	7.1	gK1	"	1200/.025	"	"	B	H+K-Ly	60°F	sl. fog comp sl weak
							"				
20/100	2"	2.8	09 III	BC	1200/.025	BS	IIIaJe	A	SB-Ly		fine
20/100	2"	20	09 III	"	"	"	"	B	SB-Ly		v sl. str
"/50	2"	2.8	M1.5 III	"	"	"	"	A	Std Vel	Diaphr 1/pr scratched	fine

85 Fri - Sun

Date 9/30/Oct 1, 1983 Observers RH - DL

8" 68°

Emulsion Batches: IIaO-E 1503-24093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48074	HD 175584	18 51.0	+36 47	19 04	19 55	1 20 W	+36 55	Fe/—	4-4
48075	HD 187849	19 47.0	+38 27	19 58	20 46	1 15 W	+39 44	Fe/—	4-4
48076	HD 208202	21 49.6	+19 15	20 50	21 48	0 12 W	+19 40	Fe/—	4- 4
48077	HD 211535	22 10.1	+22 02	21 51	23 05	1 10 W	+22 30	Fe/—	4-4
48077TI	STRIP CALN FOR PLATES 48074-84					60 SEC			
48078	HD 218634	23 04.5	+8 09	23 08	0 26	1 35 W	[illegible]	Fe/—	4-4-4
48079	HD 3627	0 34.0	+30 19	0 32	0 42	0 22 W	+30 50	Fe/—	4-44
48080	HD 6268	0 58.7	+0 50	0 45	1 18	0 35 W	+1 20	Fe/—	4-4
48081	HD 14189	2 12.6	+39 49	1 25	2 27	0 30 W	+40 15	Fe/—	4-4
48082	HD 22963	3 36.1	+32 38	2 31	3 19	0 02 E	+32 55	Fe/—	4-4
48083	HD 23922	3 43.8	+34 32	3 23	4 04	0 34 W	+34 50	Fe/—	4-4
48084	HD 25893	4 01.0	+37 49	4 08	5 41	1 55 W	+38 05	Fe/—	4-4

Spectr. Temp. ...71°F..... Dome Temp./Hum. ...63°F...70% Transparency Conditions ...Good.....

Focus .....506.....

Spectr. Temp. .....61°F..... Dome Temp./Hum. ...56°F...92% NEW DIP 86

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8" Finder											
10/100	3	5.9	M4 III	B.C.	830/.680	B.S.	IIaO-E	A	Waterloo		slight str Em Fine
0/120		6.9	M2 III	B.C.	830/.68	B.S.	IIaO-E	B	"		slight H+K Em Fine
0/100		7.4	K0 III	B.C.	830/.68	B.S.	IIaO-E	A	"	BROKEN 2 PIECES	Fine
0/100	3	7.5	G5 III	B.C.	830/.680	B.S.	IIaO-E	B	"	T=67°F F 507	Fine
							IIaO-E				
0/100		6.6	M2 III	B.C.	830/.680	B.S	IIaO-E	A	WATERLOO		slight H+K Em Fine-str
10/20		4.6	K3 III	B.C.	830/.68	B.S.	IIaO-E	B	"		str
0/60	34	2.4	A8 III	B.C.	830/.68	B.S.	IIaO-E	A	"		Fine
0/100	2	7.5	F2	B.C.	830/.68	B.S.	IIaO-E	B	"	T=64°F F: 508	Fine
20/120	2	7.2	F5 I	B.C	830/.68	B.S.	IIaO-E	A			V V slight OK
30/120	2	7.0	F0 I	B.C.	830/.68	B.S.	IIaO-E	B		T: 62°F	" " " "
0/110	2	7.9	G5	B.C.	830/.68	B S	IIaO-E	A		T- 61°F	V slight Scatt Em

87 Pg III

Date Sun Mon Oct 2-3 83 Observers ....Stg.-R.....

5m 68° Emulsion Batches: IIIaJ-Tech 09023-30093 24 Hrs
8m 68° IIIaJ-E* 15013-24093
IIaO-E 15013-30093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
+8085F	FOCUS 9EST							Fe/-	30-3
48085	HD 217675	22 57.4	+ 41° 47	18:25	18:39	355 E	+42° 17'	Fe/-	11-11
48086	HD 217050	2252.7	+ 48° 9	18:44	19:02	329 E	+48° 38	Fe/-	4-4
+8086T	SPOT CAL FOR PLATES 48085, 90, 91					15 MIN @ D4	① 17.50 ② 3900	③ 150 4800	150 4510
48087	HD 224559	23 53.7	+45° 51	19:07	20:00	331 E	+46° 20	Fe/-	4-4
48088	HD 218674	23 4.8	+49.07 +49° 07'	20:05	20:45	156 E	+45° 35	Fe/-	4-4
48088T	STRIP CAL'N FOR PLATES	48086-87				60 SEC			
48089	HD 218393	23 02.7	+49° 39	20:49	21:49	050E	+50° 09	Fe/-	4-4-4
48090	HD 217675	22 57.4	+41° 47	22:07	22:20	014E	+42° 16	Fe/-	11-11
48091	HD 217050	2252.7	+48° 9	22:24	23:04	035 W	+48° 39	Fe/-	11-11
48091T	SPOT CAL FOR PLATES	48088-89, 90-95.		* Strip Cal'n			60 SEC		
48092	HD 224559	23 53.7	+45° 51	23:08	23:40	010 W	+46° 21	Fe/-	4-4
48093	HD 218674	23 4.8	+49.07 +49° 07'	23:43	0:53	211 W	+49° 35	Fe/-	4-4
48094	HD 217050	22 52.7	+48° 09'	0:58	1:17	248 W	+48° 38	Fe/-	4-4
48095	HD 218393	23 02.7	+49° 39	1:20	02:36	400 W	+50° 08	Fe/-	4-4
48096	HD 217675	22 57.4	+41° 47	2:43	2:57	425 W	+42° 15'	Fe/-	11-11

Spectr. Temp. ...67°F..... Dome Temp./Hum. ...64°F.....82%... Transparency Conditions ...VERY HAZY WITH SCATTERED CLOUDS...

Focus .....507.....

Spectr. Temp. ..... Dome Temp./Hum. .....

88

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B FILTER				B.C.	830/.68	BS	IIIaJ+OG	A		T=67°F F=507	OK
20/70	3	3.6	B6p	B.C.	830/.68	B.S.	IIIaJ+C6	B	Be Segs	REFLECTED IRON ARC	Fine
40/49	3	5.1	B2pe	B.C.	830/.68	B.S	IIa O-E*	A	"		Fine
							IIIaJ+E6		"		
50/100		6.8	B3IV	B.C.	830/.68	B.S.	IIaO-E*	B	"		Sl wk
30/100		6.7	B3IV	B.C	830/.68	BS	IIaO-E	A			v.s/wk
							IIaO-E*				
20/100		6.9	Bpe	B.C	830/.68	BS	IIaO-E	B	"	CLOUDS	S/wk
20/70		3.6	B6p	BC	830/.68	BS	IIIaJ+C6	A	"	"	Fine
20/140		5.1	B2pe	BC	830/.68	BS	IIIaJ+C6	B	"	"	Fine
							IIaO-E				
40/50		6.5	B3IV	BC	830/.68	BS	IIaO-E	A	"		Fair
30/100		6.7	B3IV	BC	830/.68	BS	IIaO-E	B	"	BROKEN 3 PIECES CLOUDS	S/wk v.s/dbl
40/50	3-4	5.1	B2pe	BC	830/.68	BS	IIaO-E	A	"	"	Fine
30/100		6.9	Bpe	BC	830/.68	BS	IIaO-E	B	"		S/wk
20/70		3.6	B6p	BC	830/.68	BS	IIIaJ+C6	A	"		Fine

99 Pg #2

Date Sun Mon Oct 2 3 83 Observers Stg - R

5" 68 Emulsion Batches: not current (Fg)
Plate 609023 - 300932 4Hrs

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48097	HD217050	22 52.7	+48°9	3:01	3:58	5 30 W	+48°39	Fe/—	11½-17
48097F	Focus Test							Fe/—	30-30

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..Hazy.....

Focus .....

Spectr. Temp. ..65°..... Dome Temp./Hum. ..60°/96%.. 90

Comparison/Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	/88		5.1	82pc	B.C.	830/.68	B.S.	IIIa-Fab	B	Be Stg	9:64OF F=508	S/uK
	Cluster				BC	830/-6½	BS	IIIaJ+G	A			OK

91

Date Wed-Thurs Oct 5-6/82 Observers Sky-Tel

Emulsion Batches: 4½° 6g° Hal-F 09023-30093 A5 3F 24hr
IIaO-E 15013-30093

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48098	HD217675	22 57.3	+41 47	21 51	22 05	00 18E	+42 17	Fe/-	17-17
48099	"	22 57.3	+41 47	22 07	22 20	00 03E	"	"	17-17
48099T	Spot Calib	for 48098-48101			15 min @ D4	17.5V 3900	15V 4300	15V 4210	
48100	HD217050	22 52.7	+48°9	22 25	23 12	00 56W	+48 37	Fe/-	11-11
48101	HD217050	22 52.7	+48°9	23 15	00 02	1 45W	+48 37	Fe/-	11-11
48102	HD218393	23 ~~05.3~~ 2.7	~~+50 6~~ +49 39	00 09	01 26	258W	+50° 09	Fe/-	5-5

Spectr. Temp. 60°F Dome Temp./Hum. 54°F / 93% Transparency Conditions Hazy

Focus 509

Spectr. Temp. 56°F Dome Temp./Hum. 48°F / 100%+

92

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/140	2"-3"	3.6	B6p	BC	830/68	BS	IIaJ-Esg	A	Be-Stg	Labeled 99	Post Sh Sl Sh
10/142	"	"	"	"	"	"	"	B	"	Labeled X	"
							"				
40/160	3"	5.1	B2pc	BC	830/68	BS	IIaJ-Esg	A	Be-Stg		Fine
40/162	"	"	"	"	"	"	"	B	"		Fine
200/124	3-4"	6.9	B pc	"	"	"	IIaO-E	A	"	Set 510 T=57°F Mod	Wk

93

Date Thurs-Fri 6/7 Oct Observers Stg-Ri-Tm

Emulsion Batches:
5m 68 IIIaJ 09023-30093 AA 3.17
IIaO-E 15013-30093
No N2 5m 68 IIaO-E 15013-02103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48103	HD217675	22 57.3	+41° 47	18 45	19 30	2 48E	+42° 17	Fe/-	11-11
48104	HD217050	22 52.7	+48° 9	19 37	1954	2 20E	+48° 38	Fe/-	5-5-5
48105	HD224559	23 53.7	+45° 51	1958	2049	2 26E	+46° 21	Fe/-	5-5-
48105T	SPOT CAL FOR PLATES 48103, 10				15 MIN @ D4		① 1750 3900	② 150 4300	③ 150 4810
48106	HD218674	23 04.8	+49° 07	20 53	21 38	049E	+49° 37	Fe/-	5 5 5
48106T	STRIP CAL FOR PLATES 48104-09.					60 SEC			
48107	HD218393	23 02.7	+49° 39	2143	00 00	1 37W	+5008	Fe/-	5-5-
48108	HD218674	23 04.8	+49° 07	0 03	1 03	238W	+	Fe/-	5-5- 5
48108T	Spot Calin - [Sensitivity Test after 3.75 hrs Evacuatn]					15 min @ 15V	D4 3900	D3 4300	D2 4810
48109	HD218393	2302.7	+49°39	1 06	2 20	3 58W	+5008	Fe/-	5-5-5
48110	HD217675	22 57.3	+41°47	2 40	2 53	4 35W		Fe/-	17-17
48111	HD217050	22 52.7	+48°9	2 57	3 17	500W	+48° 37	Fe/-	5-5-
48111T	Strip Calin for	48111-13		60sec					
48112	HD224559	23 53.7	+45° 51	3 19	4 07	453W	+46° 20	Fe/-	5-5-5
48113	HD218674	23 04.8	+49° 07	4 20	5 41	720W	+49° 33	Fe/-	5-5-5

Spectr. Temp. 9T.61°F Dome Temp./Hum. +42°F/80% Transparency Conditions Mostly clear Super Transparent

Focus 509

Spectr. Temp. 47°F Dome Temp./Hum. 39°F/100%+ We noticed the Earth's Tremor while observing! 5 20 EST 94

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		20/80	3-4	3.6	B6p	BC	830/.68	BS	IIIaJ-F	A	Be-Stg	Thin cirrus clouds	Fine
		40/60	3-4	5.1	B2pe	"	"	"	IIaO-E	B	Be-Stg		Fine
		80/120	3-4	6.5	B3IV	"	"	"	IIaO-E	A	Be-Stg		Fine
									IIaO-E			T=58°F F=509	
		80/120		6.7	B3IV	BC	830/.68	BS	IIaO-E	B	Be-Stg		Fine
									IIaO-E			T=57°F F=510	
		200/300	3-4"	6.9	Bpe	BC	830/.68	BS	IIaO-E	A	Be-Stg		Fine
		80/127	3"	6.7	B3IV	"	"	"	"	B	"	Severe oscill. of 21cm W	v slwk
									IIaO-E*			* 06103-06103 The new IIaO batch	
		80/103	3	6.9	Bpe	BC	830/.68	BS	IIaO-E	A	Be-Stg	T=52°F Sct 512 Cloud	slwk
		40/143	3"	3.6	B6p	"	"	"	IIIaJ-F	A	"		Fine
		40/61	4-5"	5.1	B2pe	"	"	"	IIaO-E**	B	"		Fine
									"				
		80/120	4-5"	6.5	B3IV	BC	830/.68	BS	"	A	Be-Stg	T=44°F → 512	Fine
		80/75	5"	6.7	B3IV	"	"	"	"	B	"	Reversed (One Prime mirror cover Fell)	Fewk Fine

95

Date Sat/Sun 8/9 Oct Observers Stg-Tn

5m 68° Emulsion Batches: IIIa-J 09023-30093 AA 3104
8m 70 IIaD-E 15013-07103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48114	HD217675	22 57.3	+41° 47'	22 02	22:21	0 12W	+42° 16	Fe/-	17-17
48114T	Spot Calib for 48114			15 min	0 04		17.5V 3900 15V 4300 12V 4810		
48115	HD218674	23 04.8	+49° 7'	22 24	2318	1 00W	+49° 35	Fe/-	5-5-
48115T	Strip Calib for 48115-22			60 secs					
48116	HD218393	23 02.7	+49° 39'	23 22	01 00	2 46W	+	Fe/-	5-55
48117	HD217050	22 52.7	+48° 09	01 09	01 29	3 24W	+4837	"	5-5 5
48118	HD218679	23 04.8	+49° 07	01 31	02 24	4 08W	+4935	"	5-5 5
48119	HD224559	23 53.7	+46° 19 +45 51	02 27	03 08	4 02W	+4621	"	5-5-5
48120	HD217050	22 52.7	+48 09	03 11	03 38	5 33W	+	"	5-5-
48121	HD224559	23 53.7	+46° +9 +45 51	03 41	04 37	5 31W	+4621	"	5-5-
48122	"	"	"	04 44	05 48	6 42W	"	"	8-7
48122F	Focus test		unreversed			0 0	≈30°	"	20-2½

Spectr. Temp. ..54°F..... Dome Temp./Hum. 46°F/82% Transparency Conditions sl hazy - Good.....

Focus .....512-573.....

Spectr. Temp. ...44..... Dome Temp./Hum. 37°F/100%.

96

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/93	4"	3.6	B6p	BC	830/.68	BS	IIIa J*	A	Be-Stg		vsl. str.
							"				
30/121	4"	6.7	B3IV	BC	830/.68	BS	IIa O-E	B	Be-Stg	broken 2 pcs saved Exp	Fine but dbl
							"				
0/135	4"	6.9	B pe	BC	830/.68	BS	"	A	Be-Stg		vsl wk
0/31	3-4"	5.1	B2pe	"	"	"	"	B	"		Fine
30/121	"	6.7	B3IV	"	"	"	"	A	"		vsl wk
80/120	3"	6.5	B3IV	"	"	"	"	B	"	T= 48° Set 573	vsl wk
0/31	3"	5.1	B2pe	"	"	"	"	A	"		Fine
80/120	3"	6.5	B3IV	"	"	"	"	B	"		vsl wk
0/97	4"	"	"	"	"	"	"	A	"	Exp. stuck	Exp. stuck v wk Fe
				"	"	"	?	B	Set 513	T= 44°F	cont sl Blue

97 Pg #1

Date Sun/Mon 9/10 Oct Observers Stg - T.h

with previous night 5" 68° Emulsion Batches: IIa-E Fg 09023 – 07103 A2 5104

8" 78 IIa-E 06103 – 06103 27 200

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48123	HD217675	22 57.3	41° 47'	18:20	18:32	3:35	+42° 14	Fe/-	17-20
48123	HD217050	22 52.7	+48° 9'	18:35	19:20	2:40	+48°34	Fe/-	20-21
48123T	Spot Cals for 48123-24, 28-29, 33			15 min @ 9		17V 3900	15V 4300	15V 4300	
48124	HD217675	22 57.3	+41°47'	19:23	19:33	2:32	+42° 13	Fe/-	20-21
48125	HD218393	23 02.7	+49° 39'	19:37	20:52	1:19	+50° 6'	Fe/-	9-9
48126	HD218674	23 04.8	+49° 7'	20:55	21:40	0:35E	+49° 35'	Fe/-	9-9
48126T	Spot Cals for 48125-27, 30-32			15 min @ 15V		12V 3900	D3 4300	12V 4300	
48127	HD224559	23 53.7	+45° 51'	21:44	22:18	0:45E		Fe/-	9-9
48128	HD217675	22 57.3	+41 47	22:22	22:31	0:25W	+42°13'	Fe/-	21-21
48129	HD217050	22 52.7	+49° 9'	22:34	23:06	1:05W	+48°36'	Fe/-	18-19
48130	HD218393	23 02.7	+49° 39'	23:08	0:41	2:30W	+50° 8'	Fe/-	9-9
48131	HD218674	23 04.8	+49° 7'	0:47	1:45	3:33W	+49° 35'	Fe/-	10-10
48132	HD224559	23 53.7	+45°51'	1:48	2:34	3:34W	+46°18'	Fe/-	10-10
48133	HD217675	22 57.3	+41° 47'	2:37	2:54	4:50W	+42°15'	Fe/-	24-24
48134	HD217050	22 52.7	+48° 9'	2:57	4:29	6:30W	+	Fe/-	15-15

Spectr. Temp. ...52°F..... Dome Temp./Hum. 45F / H=80% Transparency Conditions Photometric.....

Focus ....5.12.....

Spectr. Temp. ..... Dome Temp./Hum. ...../..... New Stop Both

98

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
~~20/80~~	~~2-3~~	~~3.6~~	~~B6p~~	~~BC~~	~~830/.68~~	~~BS~~	~~IIIaJEq~~	~~A~~	~~Be-Sty~~	~~Shutter did not open~~	
20/90	2-3	5.1	B2pe	BC	830/.68	BS	IIIaJEq	B	Be-Sty	Telescope Reversed whole night.	Fine
							"				
20/80	2-3	3.6	B6p	BC	830/.68	"	"	A	Be-Sty		Fine
70/155	"	6.9	Bpe	"	"	"	IIaO-E	B	"		Fine
30/160	"	6.7	B3IV	"	"	"	"	A	"		Fine
							"				
80/160	2-3	6.5	B3IV	BC	830/.68	BS	"	B	Be-Sty		Fine
20/82	"	3.6	B6p	"	"	"	IIIaJe	A	"	T 48° Set 513	Fine
20/81	"	5.1	B2pe	"	"	"	"	B	"		Fine
80/160	"	6.9	Bpe	"	"	"	IIaO-E	A	"		Fine
80/160	"	6.7	B3IV	"	"	"	"	B	"	T=95°F Set 514	Fine
80/160	"	6.5	"	"	"	"	"	A	"		Fine res/str
20/83	"	3.6	B6p	"	"	"	IIIaJe	B	"		res. str.
20/87	2-4	5.1	B2pe	"	"	"	"	A	"		res. str.
										cont →	

99 Pg #2

Date .. Oct. 9/10. cont.. Observers .....

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex
48135	HD 224559	23 53.7	+45 51	04 33	5. 47	6:45W	+46° 19	Fe/—	12-15
48135F	Focus test					11	11	Fe/—	27-2

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +36°F / 90.3

100

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/137	3-5'	6.5	B3 IIk	BC	830/68	BS	IIaO-E	B	Be Stg		Fine
				"	"	"	?	A		Reversed also T=41.5°F Set 513	cent sl Blue

101 Thurs - Fri

Date Oct. 13-14-83 Observers Stg - Tm

Emulsion Batches:
IIIa-J-Eg 09023 - 07103 39 39
IIIa-E 06103 - 06103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48136	HD 217675	22 57.3	41°47	2:09	2:31	4:40 W		Fe-	17-1
48136T ✓	Spot Calib	for 48136-37.		15 min @	D4 17.5V 3400	15V 4300	15V 4810		
48137	HD 217675	22 57.3	41047	2:34	2:56	5:05W		Fe-	17.12
48139	HD224559	23 53.7	45°51'	2:59	3:39	4:54	46°21'	Fe-	7
48138T	Step calib	For 48138		60secs					

Spectr. Temp. ...59°F..... Dome Temp./Hum. 48°F/95% Transparency Conditions ..... hazy-cloudy gusty

Focus .....510.....

Spectr. Temp. ..54..... Dome Temp./Hum. 45°F/95% 102

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/70	8"	3.6	B6p	BC	830/.68	BS	IIaJ-Fg	A	Be-Sky		Fine
							"				
0/70	8"	3.6	B6p	BC	830/.68	BS	"	B	Be-Sky		Fine
0/54	5"	6.5	B3III	BC	830/.68	BS	IIaO-E	A	Be-Sky	cloud	wk
							"				

103 2 large fours earlier
Sat-Sun

Date Oct. 15-16/83 Observers B.K.-T.L.

Emulsion Batches:
II.a.O.E. 06103-06103
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48139	HD 218634	23 04.5	+8 08	21 25	23 15	1 26 W	+8 38	1-1-	7-7-7
48139 ✓	Spot GC6 for 48139				15 min @ 015 W	D4 3900 & 1 38 W	D3 +300 +8 38	D3 480	
48140	HD 222399	23 25.1	+37 06	23 20	1 00	1 38 W	+37 36	Fol-	7-7-7
48141	HD 19134	2 59.6	+24 52	1 08	2 08	0 12 W	+25 12	11	7-7-7

Spectr. Temp. 52°F Dome Temp./Hum. 47°F / 92% Transparency Conditions hazy - cloudy

Focus 512

Spectr. Temp. 46°F Dome Temp./Hum. 38°F / 100%

104

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	773	80/200	2-3	6.6	M2 III	BC	830/68	BS	II-J-E	A	Waterton		Fe sl str Fine
									"				
	771	80/140	3"	10.9	F1 IV	BC	830/68	BS	"	B	"		Fe sl str Fine
	774	80/124	3"	6.1	B8	"	"	"	"	A	"	T=47°F Set 513 V closed in cloud rel pc broken 2 pcs	Fine sl blurred

105

Tour 34 people Looked at NGC 869

Date 9-20-21-1983. Observers Kly-Ri-Glendenning.... DAF // Ri

Emulsion Batches:
F+GOE 06103-14103
IIaO+f 09023-13103 18Ls

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
48142F	Focus 9 RET							Fe	20-20
48142	HD 183912	19 26.7	+27°45	18:15	18:51	1:00W	+27°57	Fe We W26=10	6-6
48143	HD 186741	19 44.5	+10 22	18:59	20.14	2:06W	+10 36	"	6-6
48144	HD 183912	19267	+2745	20:20	21:33	B:40W		"	6-6-6
48144T	SPOG CAL FOR PLATES 48142-				.5 MIN @ 15 VOLTS		① D4 3600 ② D4 3900	③ 153 4300	
48145	HD 215182 η Peg	22 383	+29 42	21:42	22 03	00 59W	+30°09		6-6-6
48146	HD 202109	2108.7	+29 49	22:07	22:48	03" 14W	+30°10	"	6-6-6
48147	MD 3712	00 348	+55 59	22:55	23:15	00 06W	+56°28	"	6-6-6
48148	HD 5448	00 51.2	+37°57'	00:19	00:36	01"19W	+38°25	"	6-6
48149	HD 12111	01 53.7	+70°25	00:42	01:12	00"50W	+70°51		6-6-6
48150	HD 17878	02 47.2	+52 21	01:22	01:54	00"90 W	+52°44	Fe We W26=10	9-9
48151	HD 18925	02 57.6	+53°07	02 00	02:14	00" 50 W	+53°27'	"	9-9
48152 V	HD 33328	05 09.4	-03°53	02 35	03.16	00" 14E	-03°45	Fe/-	20-2
48152T V	SPOG CAL FOR PLATES 48152-				15 MIN @ D4		① 1750 3900 ② 150 4300	③ 150 4810	
48153	HD 37468	05 33.7	-02°39	03:22	03:47	00" 12E	-02°35	Fe/-	20-2

Spectr. Temp. 48°F Dome Temp./Hum. 42°F 61% Transparency Conditions CIRRUS CLOUDS

Focus 511 Used after mucking LV

Spectr. Temp. Dome Temp./Hum.

106

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
"B" FILTER				B.C.	1200/.2	150/.5	IIaO	A		should use .7 for focus	ok?
20/50	5	4.2	K5II +B	B.C.	1200/.2	150/.5	IIaO-E	B	KK-Asmsp	BROKEN 2 PIECES	fine
20/60	4"	4.1	K3II	"	"	"	"	A	"	BROKEN 2 PIECES	lost
20/50	3"	4.2	K5II +B	"	"	"	"	B	"		Fine
							IIaO-E				
20/50	3"	3.8	G2II +B	B.C.	1200/.2	150/.5	"	A	"	Set 512, T=46	Fine
20/60	3"	4.2	G8II	"	"	"	"	B	"		fine
20/60		2.5	K0III	"	"	"	"	A	"		UV violet blue strong
20/40	3	4.0	A5I	B.C.	1200/.2	150/.5	IIaO-E	B	"	9=420F F=513	fine
20/45		4.70	A3II	"	"	"	"	A	"		fine
20/50		V3.07	G5III A5	"	"	"	"	B		BROKEN 2 PIECES	fine
20/50		3.6	G8III A5I	"	"	"	"	A	"	~	fine
20/90	4	4.07	B5V	B.C.	830/.68	B.S.	IIIaJ-ef	B	Be-Bl	9=40°F F=515	Fine
							IIIaF-ef				
20/90		3.51	O9.5I	B.C.	830/.68	B.S.	IIIaJ-ef	A	SB Bl		Fine

107 #2

Date Oct 21 1983 CONJT. Observers R.

7m 68°

Emulsion Batches:
IIIa-J ef 09023 - 13103 18hs
IIa-E 06103 - 20103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48154	HD 33328	05 04.4	−8° 53′	03:53	04:31	01h01 W	−08045	Fe/—	20-20
48155	HD 66141	07 57.1	+02° 36	04:48	05:50	00h33 E	+02°25	Fe/—	13+13
48155F	FOCUS 9EST							Fe/—	20-20

Spectr. Temp. ..... Dome Temp./Hum. 33°F 60% Transparency Conditions ... good .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

108

Exp. Mtr. 3" FILTER	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/90	4	4.07	3 2 III	B.C.	830/.68	B.S.	IIIaJ	B	Ba/B1		fine
40/90		5.5	#2 III	B.C.	830/.68	B.S.	IIaO-E	A	Std-Val	1.61	Str re Str
				B.C.	830/.68	B.S.	IIaO	B		T = 38°F F = 515	

109

Date 09.21.22.1983 FRI SAT Observers Byt-R-DAF

M1/2 = 68° Emulsion Batches: IIaO-E 06103-20103 19 156
IIIaJ-F 09023-13103 13hrs

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48156	HD 184927	19 31.6	+31°04'	18 00	19 44	1 51W	+31°15'	Fc/-	13-13
48157	HD 217811	22 58.2	+43°31'	20 03	20 31	0 47E		Fc/-	13-13
48/57T	SPOT CAL FOR PLATES 48156,57,63,66				15 MIN @ 150 VOLTS		① 04 3900 ② 03 4300 ③ 02 4810		
48158	HD 11241	01 45.5	+54° 39'	20 48	21 17	2 51E	+55°04	Fc/-	20-20
48159	HD 21699	03 25.1	+47° 41	21 32	22 30	3 19E	+47°57	Fc/-	20-20
48160	HD 12929	02 01.5	+22°59'	22 46	22 52	1 31E	+23° 24'	Fc/-	20-20
48161	HD 37468	05 33.7	-02°39'	23 08	00 00	3 56E	-02°36	Fc/-	20-20
48161T	SPOT CAL FOR PLATES 48159-62,64,65				15 MIN @ 04		① 17.5V 3900 ② 15V 4300 ③ 15V 4810		
48162	HD 33328	05 04.4	-08° 53'	00 04	00 44	2 41E	-08°45	Fc/-	20-20
48163	HD 37017	05 30.4	-07° 31'	00 49	02 35	1 15E	-07 30	Fc/-	13-13
48164	HD 33328	05 04.4	-08° 53'	02 42	03 15	0 10E	-08°45	Fc/-	20 20
48165	HD 37468	05 33.7	-02° 39	03 20	03 33	0 20E	-02°35	Fc/-	20-20
48166	HD 37776	05 35.9	-01° 32'	03 38	06: 02	2 06W	-01°30	Fc/-	13-13
48166F	Focus Test							Fc/-	25-25

Spectr. Temp. 47°F Dome Temp./Hum. 59% 43°F Transparency Conditions Good but cirrus moving in by dawn

Focus 513

Spectr. Temp. ____ Dome Temp./Hum. 46°F 100%

110

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B° FILTER											
80/251	3	~~7.3~~	B2Ip	B.C.	830/.68	B.S.	IIaO-E	A	Bln - He*		Fe too str Esp Fine
80/251		6.3	B2I	B.C.	830/.68	B.S.	IIaO-E	B	Bln - He* Stel. Abs		"
							~~IIaO-E~~			edge effects	
20/90	2	5.34	B2I	B.C.	830/.68	B.S.	IIIaJ-f	A	SB - Bln		Fe v sl str sl str
20/135		5.36	B3IIIp	B.C.	1100/-.025	B.S.	IIIaJ-f	B	Bln - He*	T=45°F F: 512	Fe Fine Fine
2/10		22	K2IIIab	B.C.	830/.68	B.S.	IIIaJ-f	A	Stel Abs	T=44°F F=514	Fe str sl str
40/180	4-5	3.51	O9.5I	B.C.	830/.68	B.S.	IIIaJ-f	B	SB - Bln	BROKEN 3/4" missing	Fe v sl str fine
							IIIaJ-f				
40/180	3-4	4.07	B2IIe	B.C.	830/68	B.S.	IIIaJ-f	A	Be - Bln		Fe sl str Fine
80/240		6.42	B2Ip	B.C.	830/.68	B.S.	IIaO-E	B	He-Rich Bln		Fe sl str Fine
20/90		4.07	B2IIe	B.C.	830/.68	B.S.	IIIaJ-f	A	Be - Bln	T=41°F F: 515	Fine
20/90		3.51	O9.5I	B.C.	830/.68	B.S.	IIIaJ-f	B	SB - Bln		Fe sl str sl str
80/240	3	6.83	B2V	B.C.	830/.68	B.S.	IIaO-E	A	He-Rich Bln	cirrus	Fe str Fine
				B.C.	830/.68	B.S.	IIaO	B		T=40°F F=515	OK

111

Date Thurs Fri Oct 27/28 Observers Kly.-Tn.-Bouchard/Tn

8m 68° Emulsion Batches: IIaO-E 06103 - 20103 22193

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48167	HD 12111	1h53m.7	+70°25'	22:41	23:37	00:32E	+70°52'	Filter D4 D3 D2	6-6-6
48167T	Spot calib for 48167 -71			15min @ 15V		3900	4300	4810	
48168	HD 17878	2 47.2	+52 21	23:42	00 17	00 29 E	+52 44	Fe Ne Neon 10	9-9
48169	"	"	"	00 20	01 10	00 24 W	- "	"	9-9
48170	HD 18925	2 57.6	+53 07	01 14	01 32	0 35 W	+53 31	"	9-9
48171	HD 12929	2 1.5	+23 59	01 45	02 02	2 04 W	+23 26	"	9-9

Spectr. Temp. 44° Dome Temp./Hum. 44.5/87% Transparency Conditions ... some cloud ... i.l.

Focus 512

Spectr. Temp. 44°F Dome Temp./Hum. 42/92% 112

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/45	3-5"	4.7	A31V	B.C.	1200/-.035	150μ/1.5	IIaO-e	A	KKAsmSp	wrong tilt for UV messy labeling ~ GE-62	F
		3					"		should have been 3600 set		"
50/53	5"	3	GSIII +A5	"	1200/+.025	"	"	B	"	wrong tilt for UV	"
20/50	"	3	"	"	1200/-2	17μ/1.5	"	A	"	cloudy some	12
20/50	5"	3.63	G8IIIa +A3V	"	"	"	"	B	"		"
20/60	5"	2.2	K2 III +.6	"	"	"	"	A	std Vel		"

113

Date Fri-Sat Oct 28-29/83 Observers Byt-Tu-Harper

Emulsion Batches:
5" D19 IIIaJ-cfs 0902.3 - 13103 18 hrs
IIaO-E 0610.3 - 27103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48172	HD 33328	05 04.4	-8 53	00 30	00 59	1 57E	-8 44	Fe/-	13-13-13
48172T	Spot calib For 48172			15 min @ D4	17.5V 3900	15V 4300	15V 4810		
48173	HD 33328	05 04.4	-8 53	01 00	01 23	1 33E	-8 44	Fe/-	13-13-13 ?
48174	HD 37017	05 30.4	-4° 34'	01 30		1 42E	-	Fe/-	7-14

Spectr. Temp. 53°F Dome Temp./Hum. 44°F / 88% Transparency Conditions Some cloud

Focus 512

Spectr. Temp. 52°F Dome Temp./Hum. 43°F / 92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/92	4"	4.07	B2IVe	BC	830/.68	BS	IIaJ-cfg	A	Be-Bln	F s' str. S1 s'tr	
							IIaJ-cfg				
20/100	4"	4.07	B2IVe	BC	830/.68	BS	〃	B	Be-Bln		Fine
	4"	6.42	B2Vp	BC	830/.68	BS	IIaO-E	A	Sr Bln	Cloud [illegible]	

115

Date Sat. Sun. Aug 29-30 1903 Observers BK-RI

8" 65° Emulsion Batches: IIaO-E 06103-27103 21 676

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
48174F	Focus Test							Fe/—	25-8
48174	HD 194093	20 18.6	+39 56	17 50	17 54	0 15E	+40° 15	Fe/—	12-2
48175	HD 187639	19 45.9	+38 24	17 56	19 30	1 54W	+38°44	Fe/—	12-12
48175T	SPOT CAL FOR PLATES 48174-84				15 MIN @ 15 VOLTS	@ D4 8900	@ D3 9300	@ D2 T 4810	
48176	HD 206778	21 39 3	+9 25	19 35	19 44	0 12W	+9°52	Fe/—	6 5
48177	HD 211073	22 09.6	+39 13	19 46	20 38	0 36W	+39°42	Fe/—	12-12
48178	HD 211300	22 11.1	+72 49	20 15	22 22	2 22W	+73°17	Fe/—	12-12
48179	HD 223582	23 45.6	+23 39	22 28	" 15	2 32W	+54°09	Fe/—	12 12
48180	HD 25893	4 01.5	+37 49	2 22	3 34	1 40W	+38 05	Fe/—	12 12
48181	HD 32092	4 55.6	+26 32	3 39	4 45	2 00W	+26 41	Fe/—	12-12
48182	HD 34152	8 20.7	+34 52	4 50	5 44	0 24E	+24 28	Fe/—	12-12
48183	HD 74874	8 41.5	+6 47	5 48	5 54	0 36E	+6 33	Fe/—	18-18
48184	HD 87422	10 02.5	+32 06	5 56	6 21	1 32E	+31 45	Fe/—	12 12

Spectr. Temp. 47°F Dome Temp./Hum. 38°F 74% Transparency Conditions Good
SEEING NOT TO HOT
Focus 513
Spectr. Temp. 37°F Dome Temp./Hum. 33°F 92%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B" FILTER				B.C.	830/.68	B.S.	IIaO	A			
4/12		2·9	K3 Ib	B C	830/.68	B.S.	IIaO-E	B	Waterhouse	poor label ?	OK
20/140	3-5	7.0	K3 III	B.C.	830/.68	B.S.	IIaO-E	A	"	0.85	comp str Fine
							IIaO-E				
8/18		2·9	K2 Ib	B.C	830/.68	B.S.	IIaO-E	B	"	T=440F F=514	Fe str str
40/40		5·5	K3 II	B.C.	830/.68	B.S	IIaO-E	A	"	1.84	comp str Str
80/160		7·1	K2 II	B.C.	830/.68	B.S.	IIaO-E	B	"		Fine
90/160		7·6	K2 I	B.C.	830/.68	B.S.	IIaO-E	A	"		Fine
200/200	3-4	10	K5 I	B.C.	830/.68	B.S.	IIaO-E	B	"	T=400F F=515	Fine
80/160	3	7·3	F5 I	B.C.	830/.68	B.S	IIaO-E	A	"	T=370F F=516	Fine
80/160		7·2	K3 I	B.S.	830/.68	B.S.	IIaO-E	B	"		comp str Fine
8/16		4·0	F8 I	B.C.	830/.68	B.S.	IIaO-E	A	"		Fe str Str
40/40		6·0	F5 I	B.C.	830/.68	B.S	IIaO-E	B	"		comp str Fine

117

Date Sun. Mon. Oct 30-31/93 Observers K.K.-Tq/T.M.

Emulsion Batches:
IIaO-E 06103-27103
IIaO-E 06103-30103
IIaD-E 09103-13103
IIaD-E 09203-27103

Plate No.	Object	R.A. 1900/1983	Declination 1983 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48185	16 Cyg	19 41.4 1900	+50 29 1900	18 54	19 05				
48186	E2760	21 02.7	+33 44	19 23	19 33				
48187	HD 221264	23 25.5	+30 18	19 59	21 43	≈0 30W	+	Fe/-	7-7-7
48187T	Spot Calib	for 48187-88.			15min @ 15V		D4 3900 D3 4300	D2 4810	
48188	HD 219080	23 8.0 1950	+48 51 1900	21.49	22 00	01 05W	+49 22	Fe/-	11-11
48189	NGC 7662	23 25.0	+42 23	22 22	22 53	01 45W	+42 28		
48190	NGC 7662	"	"	23 07	23 38	02 30W			
48191	HD 21699	03 25.1	+47 41	00 03	01 05	00 08E	+48 01	Fe/-	13-13
48191T	Spot Calib for	48189-91			15min @ D4	15V 4810	15V 4300		
48192	HD 33328	05 4.4	-8 53	01 15	01 36	17.5V 15E	-8 42 15V	Fe/-	12-12
48192T	Spot Calib For	48192, 94			15min @ D4	3900	4300 4810		
48193	HD 37017	05 30.9	-4 34	01 39	02 42	0 34E	-4 27	Fe/-	7-7-7
48193T	Spot Calib For	48193			15min @ 15V	D4 3900	D3 4300	D2 4810	
48194	HD 33328	05 4.4	-8 53	02 45	03 04	0 15W	-8 42	Fe/-	20-20
48194F	Focus test					"	"	Fe/-	5-5
48194F2	Focus							Fe/-	5-5

Spectr. Temp. +43°F ... Dome Temp./Hum. +38°F/77% ... Transparency Conditions ... clear

Focus ... 514

Spectr. Temp. 40.5°F ... Dome Temp./Hum. +34°F/90% ... 118

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Tr. Lg		V 360	G3V G5V	DBL Star Cam	Tertiary				DS Ht	Spacing 20, 2.5 secs	
" "		Z3 8.1	A2	"	"				"	Spacing 25, 6.3, 16, 2.5	
0/160	1-2"	B= 7.7	F5	BC	830/.68	BS	IIaO-E	A	Asm-Sp/KK	Usual double ~10"	str
							"				
20/40	1"	490	F0IV	"	"	"	"	B	AsmSp/KK		str
				BC	830/.4	St 1, 1/2	IIIaJ fg	A	Ph Neb/KK		
				"	"	"	IIIaJ fg	A	"	Tel. removed	
20/135	1"	5.36	B0Ib	BC	1200/.025	BS	"	B	He-Bln	1.19	Fine
							"				
0/98	1-2"	4.07	B2Ve	BC	830/.68	BS	*IIIaJ fge	A	Be-Bln	set 515 T= 41°F 1.17	Fine
							"				
0/120	1-2"	6.42	B2Ve	BC	830/.68	BS	*IIaO-E	B	He-Neb-Bln		
							"				
0/95	2"	4.07	B2Ve	BC	830/.68	BS	*IIIaJ fge	A	Be Bln		
				"	"	"	IIaO	B		Set 515 T= 40.5°F	
				BC	1800/45°	120μ	TiO	B		Set 511 T= 53°F	Broken

119

Emulsion Batches:

Date Nov. 1, 83 Observers JH

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	~~Ending Time~~ Begin Hr L E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
48194T1	Flexure tests with new grating mount				0 0	4 00E	+12°	FeNe/ND 0.6	5-5
T2	"				4 00E	0 0	"	"	"
T3	"				4 00E	4 00W	"	"	"
T4	"				4 00W	0 0	"	"	"
T5	"				0	0	1st " 2nd +50° → -20°	"	"
48194F3	Focus test				0	0	-20	"	5-5
Nov 8 ↓									
48194T6	Flex tests after grating secured				0 0 → 4 0E		+12°	FeNe/ND 0.6	3-3
T7	"				4 0E	0 0	"	"	"
T8	"				4 0E	4 0W	"	"	"
T9	"				4 0W	0 0	"	"	"
T10	"				0	0	+40° → -20°	"	"
F4	Focus test				0	0	-20	"	3-3

Spectr. Temp. 51.5°F ..... Dome Temp./Hum +47 / 97% Transparency Conditions .....

Focus ..... 510 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

120

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1st exp is comp mode 2nd Exp is stellar mode				BC	1800/45°	120μ	IIaO	A		* severe blue flex + transverse ↓	
〃		〃					〃	B		severe flex + tsl transverse ↑	
〃		〃					〃	B		severe flex + transverse flex	
〃		〃					〃	A		sl red	
〃		〃			〃	〃	〃	B		severe blue flex ↑	
					〃	〃	〃	A	T 51°F	Set 510	
							— T1 dec			or transverse flex in opposite direction	
							of trans		flex of	T2 : T3	
						T4	— T4			centering together of 1st 3 exposures	
1st Exp = comp 2nd exp is stellar			Set 507 T = 52°F		1800/45° *	120μ	IIaO	A	* tilt reads 42.3°	severe blue + trans ↓ severe	
					〃		〃	B		〃 red ↑	
Note - Same focus as at top of page!!					〃		〃	B		red A	
					〃		〃	A		sl 1st-order flex	
					〃	T4	〃	B		blue flex tsl trans ↓	
					〃		〃	A	T = 58°F Set 507	continued	

12\

Date Nov. 3 Observers Jm

Emulsion Batches:
II a D. E.
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Begin H.A. ~~Ending Time~~ E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
T11	More Flex tests, but with weighted				0 0	4 00E	+12°	F+2 ND 0.6	3 3
12	330/.68 grating and regular mount				4 00E	4 00W	"	"	"
13	↓				4 00W	0 0	"		
14					0	0	+60° → −20°		
15	TK-F5 with "obese" weights removed.				0 0	4 00E	+12°		
16					4 00E	4 00W	"		
17					4 00W	0 0	"	1	1
F5	Focus test				0	0	"	F+2 ND 0.6	6-6

Spectr. Temp. +44°F ..... Dome Temp./Hum. ...../..... Transparency Conditions .....

Focus ..... 5.14 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Begin Hr L in Comp mode End Hr L in Stellar mode for all.				BC	830/68	120μ	D-0-F	A		Some red flare	
								B		blue flare + trans ↑	
								A		Some red flare + sl trans ↓	
								B		Some Red flare + trans ↑	
								A		Some Red flare	
								B		Some blue flare + trans ↑	
								A		Ok Exp + sl trans ↓	
							IIaO?	B	T = 43.5°F	* Some flare from Exposure Time Change Set 5.14	

123 Mon-Tues

Date Nov. 7-8.83 Observers T.w.

8" 68° Emulsion Batches: IIaO-E 06103 - 27103 18 168

5" 68° IIa-E 09023 - 27103 fg

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48195	HD 184927	19 31.6	+31 04	17 48	19 59	3 13W	+31 14	Fe/-	7-7
48195T	Spot Calib for	48195-96,99		15 min @ 15V	D4 3900	D3 4300	D3 4810		
48196	HD 221354	23 25.5	+30 18	20 03	21 59	1 18W	+30 44	Fe/-	7-7-7
48197	HD 21699	03 25.1	+47 41	22 08	23 15	1 27E	+47 59	Fe/-	13-13
48197T	Spot Calib for	48197-98		15 min D4	17.5V 3900	15V 4300	15V 4810		
48198	HD 33328	05 04.4	-8 53	23 23	23 59	2 20E	-	Fe/-	18-18
48199	HD 37017	05 30.4	-4 34	00 04	01 37	1 07E	-4 30	"	7-7-7
48199F	Focus test					0 0	"	"	

Spectr. Temp. ....18°F..... Dome Temp./Hum. +47°/70% Transparency Conditions ...some scattered.....

Focus .....513.....

Spectr. Temp. ....45°F..... Dome Temp./Hum +42°F/100%+

124

Exp. Mtr. B f. 1.0	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/255	1"	7.30	B2Vp	BC	830/-68	BS	IIaO-E	A	He-Hg		Fine
							IIaO-E				
30/190	1"	7.7	F5	BC	830/-68	BS	"	B	As Sp tk	why so much weaker than last plate?	good
2/135	1"	5.7	B2Vp	"	1200/-.025	BS	IIIa-J-E	A	He-Hg	broken 2 pcs. saved	
							"				
20/100	2"	4.07	B2Vp	BC	830/-68	BS	"	B	Be Hg	T=45° Sol 514	Fe sl wk Fine
20/120	2"	6.42	B2Vp	"	"	"	IIaO-E	A	H Rich-Hg	fog coming	Fine
				"	"	"	"	B		Sol 514 T=47°F	

125 Thurs-Fri

Date Nov. 17-18/83 Observers T.M

8m 68°F

Emulsion Batches: II a.O.E 06103 — 08113 16 186
III a.J.E 09023 — 27103 f9 20m3

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48200	HD 184927	19 31.6	+31 04	17 35	20 39	4 33 W	+31 14	Fe/—	7-7-7
48200T	Spot Calib for 48200, 03, 05, 07			15min@15V		D4 3700 D3 4300 D7 4810			
48201	HD 21699	03 25.1	+47 41	20 46	22 21	1 42 E 17.5V 3900 15V 4300	+47 59 15V 4810	Fe/—	13-13-13
48201T	Spot Calib for 48201, 2, 4, 6				15min@04 3900				
48202	HD 33328	05 04.4	-8 53	22 29	23 05	2 35E	-8 46	Fe/—	17-17
48203	HD 37017	05 30.4	-4 34	23 09	00 35	1 30 E	-4 28	"	7-7-7
48204	HD 33328	05 04.4	-8 53	00 39	01 05	0 35E	-8 46	"	17-17
48205	HD 37017	05 30.4	-4 34	01 08	02 19	D 09W	-4 31	"	7-7-7
48206	HD 33328	05 04.4	-8 53	02 22	02 45	1 05W	—	"	17-17
48207	HD 35410	05 19.4	-0 59	02 49	03 17	1 22W	-0 53	"	11-11
48207F	Focus test					"	"	"	21-21

Spectr. Temp. .136°F..... Dome Temp./Hum. +29°F/88% Transparency Conditions ..some...cloud-sl. hazy....

Focus ....517-515-516.....

Spectr. Temp. .+29.5°F..... Dome Temp./Hum +20°F/93% 126

Comparison Filter Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
7-7	30/284	3.5"	7.30	B2Vp	BC	830/-68	BS	IIaO-E	A	He-Bln	some cloud	fine
								"				
12-12	20/140	3"	5.36	B2IIIp	BC	120/-025	BS	IIIaJ-E	B	He-Bln	Set 515 T=33°F	
								"				
1-1	20/103	3"	4.07	B2Ve	BC	830/-68	BS	"	A	Be-Bln	T=32°F Set 518	sl. str. fine
7-7	30/260	3"	6.42	B2Vp	"	"	"	IIaO-E	B	He-rich		v sl. str.
12-12	20/100	2-3	4.07	B2Ve	"	"	"	IIIaJ-E	A	Be-Bln		strong
7-7	30/260	"	6.42	B2Vp	"	"	"	IIaO-E	B	He-rich		v sl. str.
12-12	20/106	2"	4.07	B2Ve	"	"	"	IIIaJ-E	A	Be-Bln		sl. str.
11-11	20/24	2"	5.2	K0III	"	"	"	IIaJ-E	B	stellar		fair
21-21					"	"	"	IIaO	A		cent vsl real	

127

Date Nov 21-22. Mon: Tues. Observers T.H.

Emulsion Batches:
8"66°! IIaO-E 06103 - 08113 (8171)
5"68° IIIaJ-Efg 09023 - 27103

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48208	HD 217811	22 58.2	+43 31	17 35	18 11	≈01 04 E	+43 59	Fe/-	7-7-7
48208T	Spot Calib for	48208, 09, 12.			15min @ 15V	D4 3400 D3 4300 D2 4810			
48209	HD 12323	01 55.8	+55 08	18 19	21 06	01 11 E	+55 32	Fe/-	7-7-7
48210	HD 21699	03 25.1	+47 41	21 12	22 11	01 36 E	+47 58	"	20-20
48210T	Spot Calib for	48210 - 11,13		15min @ DA		17.5V 3400 15V 4300	15V 4810		
48211	HD 33322	05 04.4	-8 53	22 19	23 03	2 21 E	-8 46	Fe/-	20-20
48212	HD 37017	05 30.4	-4 34	23 07	01 21	0 29 E	-4 29	"	7-7-7
48213	HD 21699	03 25.1	+47 41	01 28	02 58	3 13 W	+47 58	"	21-21
48213F	Focus test					"	"	Fe Ne/-	11-11

Spectr. Temp. 47°F Dome Temp./Hum. +45°F / 70% Transparency Conditions sl. hazy

Focus 513

Spectr. Temp. 43°F Dome Temp./Hum. +34°F / 99%

128

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/72	2"	6.38	B2V	BC	830/.68	BS	IIaO-E	A	He-Std Vel		fine
							"			edge effects visible	
200/350	2-3"	8.88	B2V	BC	830/.68	BS	"	B	SB Bln		wk
20/140	2-3"	5.36	B2IIIp	"	1200/.025	"	IIIaJ-e	A	He-Bln	Shuttered 2 smd preserved some cloud still set 513	s/d
							"				
20/104	5-3"	4.07	B2Vne	BC	830/.68	BS	IIIaJ-e	B	Be-Bln	T=47° Se=73	fine
20/125	5"	6.42	B2Vp	"	"	"	IIaO-e	A	He-rich	some cloud	fine
20/144	3"	5.36	B8 IIIp	"	1200/.025	"	IIIaJ-e	B	He-Bln	T=45°F	
				"	"	"	"	A		OK Looks odd Not to be used	

129

Note Exposed plates may be Coated if → 8"66

Emulsion Batches: IIaO 06103 + Unsensitized

Date Nov. 22-23 Tue-Wed Observers T.A.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48214	HD 186791	19 41.5	+10 22	17 31	17 49	1 51 W	+10 34	Fol-	13- 13
48215	HD 209790	22 00.9	+64 09	17 59	18 30	0 14 W	+64 34	"	14-14
48216	HD 219080	23 08.0	+48 51	18 33	19 02	0 22 E	+49 19	"	14- 14
48216T	Spot Cal's for 48214-22			15 min 15V D4 3900	17.5V D3 4300	17.5V D2 4810			
48217	HD 6582	01 01.6	+54 26	19 06	19 55	1 23 E	+69 52	Fol-	14-14
48218	HD 6961	01 05.0	+54 37	19 59	20 17	1 06 E	+55 04	"	14-14
48219	HD 221264	23 25.5	+30 18	20 03	23 28	3 47 W	+30 44	"	10-10-10
48220	HD 21699	03 25.1	+47 41	23 32	00 10	0 28 W	+47 58	"	14-14
48221	"	"	"	00 11	0046	1 04 W	"	"	14-14
48222	HD 37017	05 30.4	-4 34	00 55	02 26	0 41 W	-4 31	"	10-10-10
Dec 4/83	Spot Cal's for mounting tests.								
48222T1	Plate very carefully set in frame.		(Placed snug up to front left corner for each Exp)		15 min E 15V	D4 3900	D3 4300 D2 4810		
T2	Plate set in frame so that far edge overlaps outside of frame				"	"	"		
T3	Plate with 2 corners cut off placed under 2 springs				"	"	"		

Spectr. Temp. 44°F Dome Temp./Hum. 40°F/65% Transparency Conditions Cirrus, thin

Focus 513

Spectr. Temp. 38 Dome Temp./Hum. 32°F/98%

130

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/50	1-2"	4.1	K3II	RC	1200/-.025	BS	IIaO	A	std		fine
20/60	2"	4.63	A3m	"	"	"	"	B	A3m Sp	nice dd	fine
20/60	1-2"	4.90	F0IV	"	"	"	"	A	"		fine
							"				
40/120	2-3"	5.81	G5Vp	RC	1200/-.025	BS	"	B	Hyades Sp	same cond	Fast wk fine
20/60	"	4.50	A7V	"	"	"	"	A	"		fine
20/120	2-4"	7.7	F5	"	"	"	"	B	"	nice dd	slwk
20/75	1-2"	5.36	B8Vp	"	"	"	"	A	He-Rich		fine
20/75	"	"	"	"	"	"	"	B	"		fine
20/240	2-3"	6.43	B3Vp	"	830/-.68	"	"	H	He-Rich	Set 516 cond	Fa fine

not a good sure of plate completely down for all Eyes as the far left corner may have lifted upon → IIaO → plate not exactly square.

found to be chipped at end of exp. Not noticed when loading, but it (slightly curled during exposures) IIaO

Sa-U 60 flush with guiders. IIaO-E

131

Date 1983 Dec 10/11. Observers KK-Tn

8m 66°F Emulsion Batches: Tele

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48223	HD 34029	5 09.3	+45 59	0.30	0:35	700		Fe Ne W.66 1/3	10

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ..... Cloudy .....

Focus ..... 516 .....

Spectr. Temp. ..... Dome Temp./Hum. .....

132

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B filter 2-1/20	10"	0.5	GEM + F	BC	1200/2	150μ*	IIaO		Andy EC	dAur, UG-5 b/ne slit	fine
						* What was slit length?				The slit length noted	
				when 150μ slit was put in "next page" was						.7 length. I adjusted	
									to .5	length.	

133 Sun-Mon

Date 1983 Dec. 18-19 Observers K.L.G-T.n/T.n

Emulsion Batches: Ri Dec A0687 8mm II-aF 06103-24113
4½mm IIIa J-E 09023-23113

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48224	HD 202109	21h08m.7	+29 49'	18:11	19:09	3 28 W	7	wr 66 Fe16	10-16
48225 ✓	HD 215182	22 38.3	+29 42	19 15	19 52	2 11 W D4	+3 12	11	10-16
48225T	Spot Calc for 48224	-27		15min@15V		3600 D4 3900			
48226	HD 17278	02 47.7	+52 21	19 56	21 03	0 01 E	+52 44	wr 66 Fe16	10-10
48227	HD 18125	2 57.6	+53 07	21 09	21:39	0 06 W	+53 28	11	10-10
48228	HD 35317	5 18.8	-0° 58'	21 49	22.44	1 06 W	-0° 52	Fe/—	7 7
48229 ✓	HD 29316	4 32.0	+53°17'	22:50	23:39	0 03 W D4	+53°27 D2	"	10-10
48229T	Spot Calc for 48228	-30		15min@15V		4200 D3 4300	4810		
48230	HD 32147	4 55.9	-5 52	23:46	01 42	2 13 W	-5 47	Fe/—	10-16
48231	HD 33328	5 4.4	-8 53	01 49	02 45	3 08 W 17.5V	-8 44 15V	15V Fe/—	20-20
48231T ✓	Spot Calc For 48231			15min@D4		3900	4300	4810	
48231F	Focus test					0 0 W	-8 44	Fe/—	20-2

Spectr. Temp. +24°F Dome Temp./Hum. +18°F/85% Transparency Conditions . semi-cloudy . gusty

Focus 5.16

Spectr. Temp. +15.5°F Dome Temp./Hum. +6°F/90%

Note TV voltage had to be set to 1.0 for these 2 t-max stars using UG-5 filter 134

Exp. Mtr. B Star	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/30	4-6"	4.2	G8 II	BC	1200/.2	150u 0.5mm	IIaO-E	A	KK Asm Sp-UV	UG-5 before slit	good
40/40	3"	3.6	G2 II-III	"	"	"	"	B	"	se-516 T=20°F	good
							"				
80/83	3.5-4	V=3.09	G5 III +A5	BC	1200/.2	150u 0.5mm	"	A	KK Asm-SUV	UG-5 in	uneven
40/40	3"	3.6	G8 III +A3V 057	"	"	"	"	B	"	"	good
30/124	3"	V=3.09		"	1200/.25	BS	"	A	"	UG out	fine
40/120	4	V=3.0	A5m	"	"	"	"	B	"	"	fine
							"		Part of plate missing because eyepiece started ∴ B900 spots affected.		
80/104	6"	7.27	K3 V	BC	1200/.25	BS	"	A	Asm Sp	setting very	v sl. weak
40/160	6"	4.07	PJ IIe	"	830/68	"	IIIaJ-E	B	Be-Bh	set 522 T=12°F *	Fine
							IIIaJ-E			Cloud at end	
				BC	830/68	BS	?	A	T=15.5°F set 522		
									v		
										This may be switched with #48251	

135

Date 1983 Dec 19-20/83 Observers T.M. & T.N.

R. D19@69°8 mw Dec 21 D15@68° 6 mw Dec 21

Emulsion Batches:
II a0-E 05.03 - 18123
III aJ-E 09023 - 23113

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
48232	HD 217811	22 56.2	+43 31	17 39	19 57	2 30W	+	Fe	7-7
48232T	Spot Cals for 48232, 34 + * +			15 min of 15V		D4 3900 D3 4300 D2 4810			
48233	HD 21699	03 25.1	+47 41	20 23	23 28	1 34W	+4800	Fe	13 13 20
48234	HD 39743	05 49.4	+49 01	23 ≈ 35	01 49	1 30W	+49 02	Fe	10 10 10
48234T	Spot Cals for 48233 - * +			15 min @ D4		19.5V 3900 15V 4300 15V 4810			
48234F	Focus test					0130W	+4902	Fe	20-1
	* To be used also for next night's II a0 - developed together ie *48240								* 48235-39
				(& III aJs)					

Spec
Focu
Spec
Exp
80
40
20

Spectr. Temp. +16°F ..... Dome Temp./Hum. 15°F/65%. Transparency Conditions ..hazy...cloudy.....

Focus .....524.....

Spectr. Temp. +5.5 °F..... Dome Temp./Hum. -2°F/70%

136

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60/155	5-7"	638	B2 V	BC	830/blz	BS	IIIaJ-E	A	Bh-He +5b yel		Fine
							"			+9F set 520	
120/280	5-7"	536	B8 p	BC	1200/-025	BS	IIIaJ-e	B	He-Hg		fine
200/160	4"	~7	G8 III	"	"	"	IIaO-E	A	HK-Hg	Fe v slwk increasing cloud	slwk
							IIIaJ-e				
				BC	1200/-025	BS	IIaO	B	set 520	T= °F 5.5°F	

Archie - There are no more IIIaJ 4x5s in dome and there are only 8 IIaO 4x5s. If you hold back most till Wednesday, I could use the same Blue boards 4x5s If I observe Tuesday night that is.

- Also those IIIaJs in fig should be prepared for possible use next week. KK should you have to prepare them before then.

TU

137 Tues-Wed

Date Dec 20-21/83 Observers Ly-Ty

Ri Dec 21 @ 68°F D 198 min Emulsion Batches: IIaO-E 06103 — 18123

Ri Dec 21 @ 68°F D 19 5 min IIIa-J-E 09023 — 23113

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48235	HD 1337	00 12.4	+50 53	17 22	18 12	00 27 E	+51 20	Fe/—	10-10-10
48236	"	"	"	18 13	19 04	00 25 W	"	"	6-?
48237	HD 25638	03 59.0	+62 04	19 15	21 19	~01 00 E		"	7-7-7
48238	HD 34658	05 14.0	+02 30	21 27	21 56	01 43 E	+02 ?	"	10-10
48239	HD 36695	05 28.5	−1 14	22 04	22 33	1 21 E	−1 10	"	10-10-10
48240	HD 21699	03 25.1	+47 41	22 42	23 38	1 46 W	+47 58	"	13-13-
48241	HD 39743	05 49.4	+49 01	23 42	01 58	~1 55 W	+49 02	"	15-10-10

Spectr. Temp. 15°F ..... Dome Temp./Hum. +8°F / 60% Transparency Conditions ... good .....

Focus 519 .....

Spectr. Temp. ..... Dome Temp./Hum. +4°F / .....

138

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/125	3"	6.0	O9III	BC	1209/-.025	B3	IIaO E	A	MSB-Ly		Fa wk Fine
40/123		"	"	"	"	"	"	B	"	avg slit sl ragged on 2nd	Fa sl str Fine
30/232	2½-3"	7.0	B0	"	830/68	"	"	A		13°F set 524	Fa v sl wk Fine
30/160	2"	5.7	F5II	"	"	"	"	B	S13-Gu		Fa sl str Fine
40/120	2"	5.38	B1V	"	1200/-.025	"	"	A		10° set 520	Fa Fine Fine
40/300	2"	5.36	B8Ia	"	"	"	IIIaJ-E	B	He+Hg		fine
30/224	2"	6.2	G8III	"	"	"	IIaO E	A	H+K-Hg.	note - Lo Lo Hes STOPPED #40 SNOWING.	Fa sl wk Fine

139

Date 1918 12/29-30 Thurs-Fri. Observers B'n-Tn

Emulsion Batches:
5" 68 IIIa-J-c 09023 -21123
8" 68 IIaO-e 06103 -18123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
43242	HD21699	3h 25m.1	+47° 41'	21:26	23:34	02 17 W	+47° 59'	Fc/—	14-14½
43242T	Spot Calc for 43242-51			15min	DA: 3900	175V 150 4300	15V 9:0		
43243	HD33328	5h 34m.4	-8° 53'	23:41	00 24	01 30 W	-8° 46'	Fc/—	13-13-1
43244	"	"	"	00 49	01 31	02 37 W	"	"	13-13-1
43244F	Focus					0 0	"	Fc	20:20

Spectr. Temp. 20°F Dome Temp./Hum. 5°F/72% Transparency Conditions Excellent ~ hazy
Lots of scintillation - Due to jet stream?

Focus 57.8

Spectr. Temp. 13°F Dome Temp./Hum. 13°F/

140

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/~~240~~	5-⅛"	5.36	B8IIIp	RC	1200/-.0[illegible]	BS	IIIa-J 2	A	Bin-He ★	T=20°F ~2 min Fe	slwk
Note-	Same	Spot for next night's IIIaJs					IIIaJ-E	5	developed together		slwk
20/80	5-⅜"	4.07	B2IVe	RC	830/.68	BS	IIIa-JE	B	Be-Bln	T=15°F Set 5 x 4	Fine
20/81	11	4.07	B2IVe	RC	830/.68	BS	IIIaJ-E	A	Be-Bln		Fa ok Fine
				11	11	BS	IIaE	B		T=13°F Set=24	

141

Fri-Sat

Date 1953/10/30-31 Observers RL-TJ/TM

Emulsion Batches:

5"-60° IIa-E 07923 -21123

8"-60° IIa-E 06103 -18123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48245	HD 216627	22 49.3	-16 21	17 26	17 59	01 23 W	-15 54	Fe/-	15-15-15
48246	HD 21699	03 25.1	+47 41	18 08	19 26	01 49 E	+47 59	"	15-15-15
48247	HD 33328	05 04.4	-8 53	19 36	20 26	02 25 E	-8 47	"	13-13-13
48248	HD 11241	01 [illegible]	+[illegible]° 39'	20 37	21 16	01 43 W	+55°05'	Fe/-	13-13-13
48249	HD 27192	04 12.6	+50 41	21 20	22 04	00 02 W	+50 53	Fe/-	13-13-13
48250	HD 21699	03 25.1	+47 41	22 13	23 55	02 42 W	+47 58	Fe/-	15-15-15
48251	HD 33328	05 04.4	-8 53	00 05	00 32	01 42 W	-8 45	Fe/-	13-13-13
48252	MOS 4241D	05 33.7	-0 39	00 36	02 05	02 46 W	-2 35	"	7-7-7
48252	Spot Calib for 48252-53				15 min @ 15V	D4 3900 D3 4300 D2 4710			
48253	HD 88021/2	10 03.8	+20 49	02 11	03 55	00 06 W	+20 26	Fe/-	7-7-7

Spectr. Temp. +15°F ..... Dome Temp./Hum. +9°F / 72% Transparency Conditions Excellent ..... 9.45 ft SW wind

Focus ....520.....

Spectr. Temp. +8°F ..... Dome Temp./Hum. +1°F / 72% going heavy to cloudy

142

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/135	2¾"	3.32	A3V	BC	1200/-.025	BS	IIIaJ-E	A	Gry *		Fo sl wk Fine
20/135	2"	5.36	B8Vp	"	"	"	"	B	Rh-He *		Fo vs lwk Fine
20/30	4"-6"	4.07	B2Vp	"	830/.68	"	IIIaJ-E	A	Be-Rh	Scattered from Sc-525 T +13°F	vs/st- Fe sl wk
20/80	2¾"	5.34	B2V	BC	830/.63	BS	IIIa-JE	B	SB-Bln	broken 1.5" missing 1 pr covered	Fe sl wk sl str
20/80	"	5.50	B2V	"	"	"	IIIaJ-E	A	SB-Bln		Fe vs lwk sl str
20/125	2-6"	5.36	B2Vp	"	1200/-.025	"	IIIaJ-E	B	Rh-He *	+12°F Sc+520	Fe vs lwk vs lwk
20/75	2¾"	4.07	B2Vp	"	830/.68	"	IIIaJ-E	A	Be-Bln	* Note below	good exp sl. out of focus?
80/200	3"	64	B2V	"	"	"	IIIaO-E	B	VB Bln		Fe sl str Fine
							IIIaO-E				
80/190	3"-1"	7.20	965 +A2	BC	830/.68	BS	IIIaO-E	A	VB Bln	very good exp. at end	Fe sl str sl str
										* This plate may be labeled #48231 & vis a versa since 48231 & 51 are of same star.	

1123
8123

143

Sat-Sun

Date 1984 Jan 7-8 Observers G.E.y.-T.m.

R: JAN 9 D19@68°F SNW

Emulsion Batches: IIa-E 09023-21123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48254	HD 216627	22 49.3	-16 21	17 33	18 22	2h16m W	-16 54	Fe/-	25-25
48254T	Spot Calc for	48295			15min@D4	17.5V 3900	15V 4500	15V 4810	

Probably misread should be -15 54

Spectr. Temp. +18°F Dome Temp./Hum. +5°F / 70% Transparency Conditions Fine

Focus 520

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

At this declination go to 2h40m W before telescope reaches platform. Does not hit pier. 144

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/180	4"	3.32	A3V	BC	1200/4025	BS	IIIa-E	A	Grg *	Some moonlight 2 1/4 counts at beginning None at end. (clouds?)	Fine
							IIIa-E				
										Note Fe I weak Up it 30% in future Tn	
				~							

145

Date 1984 Jan 10/11 Observers T.H

Emulsion Batches: RiTau13D19068F5 Tmax 09023 — 04014 fg 22 ms

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48255	HD 31699	03 25.1	+47 41	20 11	22 37	2 08 W	+47 59	Fe/—	18-18-18
48255T	Spot Cals for 48255	−58	(med mig 4Y)* 15 min eD4			17.5V 3900	15V 4300	15V 4810	
48256	HD 33328	05 04.9	−8 53	22 47	23 30	01 25W	−8 44	Fe/—	18-8-18
48257	HD 37468	05 33.7	−2 39	23 35	23 52	01 16 W	—	"	22-22
48258	HD 41545	06 06.3	+16 09	00 00	00 41	01 30 W	+16 08	"	14-14-14
48258F	Focus +2					0 0	"	"	30 30

Spectr. Temp. 22°F ..... Dome Temp./Hum +8°F/60%? Frozen? Transparency Conditions ..Cleaning ..... up the sky...

Focus ..... 518 .....

Spectr. Temp. ..+13°F..... Dome Temp./Hum +9°F /60%.

146

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/273	10"-4"	5.3%	B&Vp	BC	1200/+0.5	BS	IIIaJ-e	A	He * Eln		Fe sl wk V sl wk
							IIIaJ-e				
20/80	6"	407	BJVe	BC	830/+68	BS	IIIaJ-e	P	Ba-Eln	Set 524	Fe sl Fine
20/75	6"	351	095V	"	"	"	"	A	SP-Eln		Fe sl Fine
20/52	4"	473	B5V	"	"	"	"	B	SP Eln	Check clock/counter	Sl wk
				"	"	"	IIIaJ	B	T-+13°F	Set 524	
							Note Archie - I may be some				
				(In the			observing wed, or the night be				
				after			wed, particularly				
				(If the			Maybe not				
				good			Sept				
				Use			Step			Plus T=	
				with							

147

Wed. Trip 3

Emulsion Batches: R. IIaJ 13 D19068 Tech Pan 2415 Eg. 09923-04014

Date Jan 11-12 84 Observers Tug

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48759	HD216627	22 49.3	-16 21	17 44	18 24	2 35 W.	-15 54	Pol-	27-27
		Note Spot c/h 48759 T			for 48759 Also		Dichroic log		

Spectr. Temp. +13°F ..... Dome Temp./Hum. +6°F / 60% Transparency Conditions ... hazy - cirrus only .....

Focus ... 320 .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

148

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1/50	4-4½	332	#3 I	BC	L200/+025	BS	IIIa-J-Eg	B	Gry *	some cloud - hazy only	s/wt

149 Thurs-Fri

Date Jun 19-20/84 Observers T.m. (Eln. night)

Emulsion Batches:
Ri Tmax 205 min @ 68°F D19 IIIaJ-Efg. 04023 - 04014
Ri Tmax 20 D19 @ 68°F Blue Tmax D-E 06103 - 18123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Ex.
48260	HD33328	05 04.4	-8 53	17 59	19 05	2 33 E	-8 46	Fel-	20-2
					17.5V	15V	15V		
48260T	Spot Calc for 48260, 62			15 min @ D4	3400	4300	4810		
48261	HD37017	05 30.4	-4 34	19 09	21 38	0 20 E	-4 29	Fel-	77-
					D4	D3	D3		
48261T	Spot Calc for 48261, 63			15 min @ 15V	3900	4300	4810		
48262	HD33328	05 04.4	-8 53	21 42	22 09	0 37 W	-8 46	Fel-	20-
48263	HD37017	05 30.4	-4 34	22 15	00 38	2 40 W	-4 31	Fel-	77-

Spectr. Temp. ..+12°F..... Dome Temp./Hum. +6°F / 72%. Transparency Conditions .. sl. hazy - Cloud. cleared

Focus ....525.....

Spectr. Temp. ..... Dome Temp./Hum. -2°F / 72%

150

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
3/70	4"	4.7	B2V$_e$	BC	830/68	BS	IIIa-J-Cyn	A	Be Bln		Fe sl str Fine
							"				
20/210	4-5"	6.42	B2V$_p$	BC	830/68	BS	II-O-E	B	He-Rich		Fe sl str Fine
							"				
20/67	3-4"	4.07	B2V$_e$	BC	830/68	BS	IIIa-J-Cyn	A	Be Bln	T = 8° Set 527	Fe fine Fine
20/220	3-5"	6.42	B2V$_p$	BC	830/68	BS	IIIa-O-E	B	He-Rich	Hg lamp	Fe sl str Fine

Archie - There is only 14x5, start & stop is IIIa-J wedge has been done. Needed to be exposed, at first & you can't log off background of IIIa-J to finish.

1 Tab box is yet untouched is done.

151 Wed-Thurs

Emulsion Batches: R-TAN 2G D19 @ 68°F 5 min ... IIIa-f-e-f ... 09023-04014

Date Jan 25-26 184 Observers ... T.M. ... 8 min ... IIaO-e ... 06103-30123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48264	HD 21699	03 25.1	+47 41	18 04	19 21	0009E	+4800	15-/-	15-25
						17.5V	15V	15V	
48264T	Spot Calib for	48264 -	66,68	15 min @ D4		3900	4300	A2D	
48265	HD 29316	04 320	+53 17	19 32	21 09	0031W	+5327	KL	18-18-2
48266	HD 33328	05 04.4	-8 53	21 19	21 38	003DW	-846	"	18-18
48267	ADS 4241D	05 337	-2 39	21 44	23 19	0142W	-235	"	87-
						D4	D3 D2		
48267T	Spot Calib for	48267.		15 min @ 15V		3900	4300 4810		
48268	HD 21699	03 25.1	+47 41	23 26	01 10	0540W	+4800	FCL	18-18

Spectr. Temp. +34°F ..... Dome Temp./Hum. +25°F/69% Transparency Conditions .. Clear in North .....

Focus ..... 5.16 .....

Spectr. Temp. +26°F ..... Dome Temp./Hum. +15°F/85% 152

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/150	2"	5.3	B5$_p$	BC	1200/-025	BS	IIaJ-e$_{cy}$	A	He-Bln	some cloud	Fine
							IIIaJ-e$_{cy}$				
0/150	2"	5.36	A5$_n$	BC	1200/-025	BS	IIIaJ-e$_{cy}$	B	Asn Sp-Std		Fine
0/80	2"	4.07	B2V$_p$	BC	830/166	BS	IIIaJ-e$_{cy}$	A	Be-Bln	T=30F Set 520	Fine
0/115	2-3	6.4	B2V	"	"	"	IIaD-e	B	VB Bln	(54 Strong lines Hg Emission)	Fine
							IIaO-e				
20/140	3-4"	5.3	B2V$_p$	BS	1200/-025	BS	IIaJ-e$_{cy}$	A	He-Bln	T=26F Set 528* Focus Bad Exp Out	
									* Should have been set 520		

153 Fri-Sat

Date Jan. 27-28/84 Observers Jh

8"68°

Emulsion Batches: IIa-E 06103-30123

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48269	HD88021/2	10 038	+20 49	00 00	03 27	1 27 W	+20 26	Fe-	777
48269T	Spot Calib for	48269-		15min @ 15V		D4 3900	D3 4300	D7 4800	

Spectr. Temp. +26°F ..... Dome Temp./Hum. 112°F/84% Transparency Conditions Sl. hazy .....

Focus ..... Set 5.21 .....

Spectr. Temp. +18°F ..... Dome Temp./Hum. +3°F/85% 154

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/150	8"-5"	7.20	965 +A2	I.C	830/5[illegible]	BS	IIaO	A	VB Eh	(Hg Ea source) Exp	Fine
							IIaO				

155 Tues-Wed

Date JAN. 31. Feb. 1. 84 Observers Tn

7½" 70° Emulsion Batches: IIaO 06103 – 29014

5" 68° IIa-F 31083 22014 22hrs

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48270	HD 37017	05 30.4	-4 34	18 04	20 55	00 14 E	-4 29	Fe/-	7-7
48270T	Spot Calib for	48270, 78		15 min @ 5V		D4 3900 D3 4300	D3 4300		
48271	HD 33328	05 04.9	-8 53	21 01	21 32	00 48 W	-	Fe-	20-20
48272	"	"	"	21 33	22 09	01 25 W		"	20-20
48273	"	"	"	22 10	22 37	01 53 W		"	20-20
48274	"	"	"	22 38	23 06	02 21 W		"	20-20
48275	"	"	"	23 08	23 48	W		"	20-20
48275T	Spot Calib	for 48271-77.		15 min @ D4	17.5V 3900		15V 4300	15V 4810	
48276	HD 37466	05 33.7	-2 39	23 52	00 17	03 04 W	-	Fe/-	20-20
48277	HD 112028	12 48.3	+83 58	00 30	02 23	02 02 E	+83 31	Fe-	13-13
48278	HD 99028	11 18.7	+11 05	02 33	02 52	00 06 E	+10 37	"	10-10

Spectr. Temp. 123°F Dome Temp./Hum. +12°F / 70% Transparency Conditions s/ hazy

Focus 521

Spectr. Temp. +12°F Dome Temp./Hum. +3°F / 95% 1 384 156

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		80/240	6-3"	6.42	B2 Vp	BC	830/68	BS	IIaO-e	A	He Rich	Fe st wk 1st Hg Light Exp	Fine
									IIaO-e				
		20/75	3"	4.07	B2Vbe	BC	830/68	BS	IIaJ-cf4	B	Be-Bln	T=+17°F Ef 524	Fe st wk Fine
		20/80	"	"	"	"	"	"	"	A	"		Fe st wk Fine
		20/72	3-4"	"	"	"	"	"	"	B	"		Fine
		20/70	"	"	"	"	"	"	"	A	"		Fine
		20/80	3-5"	"	"	"	"	"	"	B	"	T=+13°F Ef 525	Fine
									IIIaJcf4				
		20/95	4"	3.51	09.5V	BC	830/68	BS	"	A	SB Bln		Fine
		20/130	3"	5.28	B8	"	"	"	"	B	Short-Bln		Str
		20/50	3"	4.34	F2IV	"	"	"	IIaO-e	A	Abs Str		sl. str.

157

Wed - T4415

Date Feb 15-16 1894 Observers T.M

Emulsion Batches:

5"x5" Ilford 06103 - 22014

5"x5" Ilford 31063 - 22014

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48279	HD 37017	05 30.4	-4 34	19 45	22 39	2 29 W.	-4 31	Fel-	7-7-7
48279T	Spot Calc fr. 48279				15 min @ 15V	D4 3900	D3 4300	D 4813	
48280	HD 37468	05 33.7	-2 39	22 43	23 19	3 05 W	—	Fel-	22-22
48280T	Spot Calc for 48280				15 min @ D4	17.5V 3900	15V 4300	15V 4810	
48281	HD 76151	08 49.4	-5 04	23 25	00 36	1 07 W	-5 22	Fel-	7-7-7
48281F						00	"		25-25

Spectr. Temp. +40°F Dome Temp./Hum. +35°F / 95% Transparency Conditions sl. hazy - foggy

Focus 516 – 517

Spectr. Temp. +36°F Dome Temp./Hum. +29 / 100 %

158

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
8./196	3"-5"	642	B&V$_p$	BC	830/.68	BS	IIIa-D-e	A	Herich		exp fine d. flex?
							IIa-D-e				
20/90	4"	351	095V	BC	830/.68	BS	IIIa-J-e	B	SE-Blu		fine
							IIaJ-e				
20/80	3"-	667	dG3	BC	8301.68	BS	IIIa-D-e	A	Hs Sp	cut short - too faint	fine
								B	T 36 set 517		good

159

Date 1984 Feb 16/17 Th/Fr Observers Bln-Tn

5"68 Emulsion Batches: Made 31083 - 22014 fg

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48282	HD21699	3h 25m.1	+47° 41′	18:22	21 41	3 35 W	+47° 53′	Fe/—	+10 14-14
					17.5V	15V	15U		
48282T V	Spot Calib for 48282			15 min	e 04 3900	4300	4810		

Spectr. Temp. 46°F ..... Dome Temp./Hum. 36°F / 80% outside Transparency Conditions . hazy - cloudy .....

Focus .... 5.14 .....

Spectr. Temp. 38°F ..... Dome Temp./Hum. +30° / 95% 160

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
* 20/240	2-3"	5.36	B3IIIp	BC	1200/-.025	BS	IIIa-Je	A	B1 u-Hα *	T=40°F thin cloud F=5.14	fine
* 3 14sec comps near beginning of exp 10 sec at end							IIIa J-C			* Not certain of gain - maybe 40 gain It was 200x at 1st then reset to 20 or 40?	

161 Tues.-Wed

Date 1984 Feb 21-22 Observers Tu.-Ly

Emulsion Batches:
IIIaJ-e 31083 - 22014 + 92 hrs
IIaO-e 06103 - 29014

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48283 ✓	HD 21699	03 25.1	+47 41	18 25	22 54	5 10 W	+47 58	Fe/—	14-20
48283T	Spot Calib for	48283	15 min @ D4		175V 3900	15V 4300	15V 4810		
48284	HD 39743	05 49.4	+49 01	22 57	01 05	4 58 W	+49 02	Fe/—	9-18
	1984 March 2	KK							
48284F1	Focus test —	new grating mount						Fe Ne/—	5-5
48284F2	"	"						Fe Ne/ W#6	10-10

Spectr. Temp. ..+36°F..... Dome Temp./Hum. 30°F / 65% Transparency Conditions ..good.....cond.....

Focus ....5.15.....

Spectr. Temp. ....28°F..... Dome Temp./Hum. +22°F / 96% 162

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/392	2"44	5.36	B8 IIIp	BC	1200/-.025	BS	IIIaJ-e	A	Blu-He	getting cloudy	strong
							IIIaJ-e				
80/18 * 200/38	3"	~7	G8III	BC	1200/-.025	BS	IIaOe	B	1-1-K-Lyn *	T=30°F Focus 516	OK but wk
[illegible]	200/83	sl. lt	have got 200/600 for normal exp.							Exp meter unstable (counts too low 1 Month)	
				BC	1800/41°	120μ	IIIaJ	A		F=524 T=23°	red
										Meant to use 514!	
				BC	1800/41°	120μ	IIIaJ	A		F=514 T=24°	sl blue

163

Date Sun: Mon... Mar. 4/5.. Observers ..Kly.-Tn.....

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	~~Ending Time E.S.T.~~	Hour Angle End	Declination	Comparison Type/Filter	Ex
	Flower Test				Start Hr L				
48284T1	(1st Exp Comp mode / 2nd			Stellar mode)	0 0	0400E	19.5°	Fe/-	17
48284T2	("	"	/ "	")	0400E	0100W	19.5°	Fe/-	17
48284T3	("	"	/ "	")	0300E	0400W	"	"	17
48284T4	("	"	/ "	")	0400W	0 0	"	"	17
48284T5	("	"	/ "	")	0 0	0 0	56°/-10°	"	17
48284T6	("	"	/ "	")	0 0	0 0	-10°/55°	"	17

Spectr. Temp. 30°F ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus ....515.....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1800/41°	120μ	IIaO	A			no fringes OK
								B			1.5μ ↑
								A			11μ VUP ↑
								B			9.5μ ↓
								A			2.8μ V blue ↑
								B			2.5μ V red ↓

165 Tues/Wed

Date 1984 Mar 6-7 Observers Ly - Tu

Emulsion Batches: IIaO e 03103 - 29019

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48285	HD 39743	05 49.4	+49 01	19 02	21 54	02 40 W	+49 02	Fe/-	10-10 -4
48286	HD 44990	06 19.8	+7 08	22 02	2240	2 58 W	+7 05	Fe/-	10- 20
48286T	Spot Calib	for 48285-86			15 min @ 15V	D4 3900	D3 4300	D2 4810	
48286F	Focus test					0 0	+7 05	Fe/-	20-2

Spectr. Temp. 33°F ..... Dome Temp./Hum. 18°F / 67% Transparency Conditions Sl. cirrus at start .....

Focus 515 - 517 .....

Spectr. Temp. 22°F ..... Dome Temp./Hum. ..... / .....

new grating mount
new 1203 lines/mm grating 166

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20s/83	5"	7	G811	BC	N1200/50°	BS	IIaO	A	H+K-Ly	Wanted 300 cts	weak gross flex
20/19	5-8"	≈7	F7IIa0	"	"	"	"	B	Cepk2-Ly	24°F Set 517	v. weak
							"			Closed due to snow @2240	
				BC	N1200/50°	BS	"	A	T=22F	Set 517	V. Stored
										arc strong	

167 Wed-Thurs

Date 1984 MAR 7-8. 1984 Observers T.n.-L.y.

Emulsion Batches: IIa0-E 06103 - 04033

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48287F	Focus test					0 0	+40	Fe-	20
48287	HD 39713	05 49.4	+49 01	18 46	20 59	1 49 W	+49 07	Fe-	40*
~~48288~~	~~HD 44990~~	~~06 19.8~~	~~+17 08~~	~~21 08~~	~~23 23~~	3 49 W	+706	~~Fe-~~	~~777~~

Spectr. Temp. +175°F Dome Temp./Hum. +5°F/67% Transparency Conditions ..sl. hazy

Focus 517–518

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

168

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	N1200/50°	BS	IIaO	*?		* Nos. obtained photoelectrically	sl. red
400/130	6"	27	G8III	BC	11	11	DaDe	H	H K-Ly	* Last comp in Stellar? 2nd Hartmann (ends OK)	sl. weak comp dk
~~200/50~~ **	~~6"~~	~~27~~	~~F7I$_b$~~	〃	〃	〃	〃	~~B~~	〃	~~I W2 et 518~~	~~blank~~
										** Exposure unstable	
										Maybe uncapped	

169

Fri / Sat

Date 1984 May 9-10 Observers Ly - Tn / Jn

Emulsion Batches:

Deep 8 min Pd2F IIa-O - 06103 - 09033

Muirhead .....

.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48288	HD44990	06 19.8	+07 08	19:13	20 14	0 44 W	+7 05	V/—	7-7
48289	HD 39743	05 49.4	+49 01	20 19	21 54	2 53 W	+49 02	"	7-7
48290	HD65041	07 51.7	+43 47	21 57	22 50	1 47 W	+43 32	"	7-7
48291	HD72359	08 27.2	+10 24	23 04	23 39	2 01 W	+10 10	"	7-7
48292	HD 94118	10 46.7	+46 20	23 44	00 42	0 45 W	+45 53	"	7-7
48293T	Spot Calib for 48288-92			15 min @ 15V		D4 3980 D3 4300	D2 4810		
48292F	Focus test					0 0	+30	F/—	20
48293	HD 124897	14 11.1	+19 42	01 23	01 33	01 48 E		"	10-10

Spectr. Temp. +20°F ..... Dome Temp./Hum. +11°F / 55% Transparency Conditions . Excellent .....

Focus .... 5.18 .....

Spectr. Temp. +.8°F ..... Dome Temp./Hum. +8°F / 53%

170

Comparison Filter Exp	Exp. Mtr. (of comp) B 4/4/16	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
-47	20/80	2"	6.8-7.8	F2Ia0	BC	1200/50°	BS	IIaOe	A	Bin Cap-Ly	TMon.	Std
7-7	30/161	1-2"	7	G8III	"	"	"	"	B	"	19°F Set 517	Std
[illegible]	40/60	1-2	6.9	B2V	"	"	"	"	A	SB-Ly		Std
[illegible]	40/60	2"	6.2	A0V	"	"	"	"	B	SB-Ly		Std
77	30/86	2°	7.13	A2	"	"	"	"	A	SB-Ly	clouding in Cal	wk
								II				
					BC	1200/50°	BS	IIaO	B	T=14°F	Set 517	OK
M1	40/63	1"	1.2	K2III	"	"	"	IIaO	A	Std Vel	thin cloud	Fair
										Note - Horlogs grating stuck in slanted to go further red for Horlogs		
										Try 50.3		

171

Date 1984 Mar. 11-12 Sun-Mon Observers Kly ... Jm ...

5m 68°

Emulsion Batches:
IIIa-e 31023 07024
IIa0-e 05103 04037
...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48294	HD 47105	6h 31.9	+16 29	19h 28	19h 37m	0h 06m W	16° 23'	F+/-	20-20
48295	HD 56986	7 14.1	+22 10	19h 42	20 22	00 01W		"	20-20
48296	HD 76644	8 52.4	+48 26	20 26	21 05	0048E	+48°06'		20
						175V	150	15V	
48296F	Spot Calib for 48294-96				15min04	3900	4300	4810	
48297	HD 71974	08 252	+35 18	21h 14m	22 41	01h 15 W	+ 35 01	Fe/-	8 16
48297F	Fe/Ne Test					"	"	F+/-	20-20

Spectr. Temp. ...19°..... Dome Temp./Hum. +10°F/170% Transparency Conditions . Fine - sl. hazy.....

Focus .....5.17.....

Spectr. Temp. ...13°F..... Dome Temp./Hum. +2°F/90%

172

Exp. Mtr. B Filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/315	4"	2	AOIV	BC	*1200/500	BS	IIIaj-e	A	Asm Sp KK		fine
40/300	"	4	FOIV	"	"	"	"	B	"		fine
40/300	"	3.3	A5	"	"	"	"	A	"		fine
							"				
30/46	3-4	V=75	G5	EC	1200/500	BS	II-O-e	B	Asm Sp KK	T=16° Sec 5.17 clouded but usable	wk
							IIaO	A		T=+13°	ok
→ filter wheel was spinning wildly during exp.											

173 Wed Thurs

Date 1984 Mar 14-15 Observers Ly-Tn

8"×8" Emulsion Batches: IIaO-e 06103-09034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
~~48298F~~	~~Focus test~~					0 0	~~+0~~	Fe/-	18-12
48298	HD 44790	06 19.8	+07 08	18 53	20 50	1 43W	+7 04	Fe/-	7-7 2
48298*	Spot Calib	for 48298-303		15 min @ 15V		D4 3400	D3 4300	D2 4810	
48299	HD 39743	05 49.4	+49 01	20 57	22 14	3 35W	+49 02	Fe/-	7-7-7
48300	HD 65041	07 51.7	+13 47	22 22	23 10	2 28W	+43 33	"	7-7-7
48301	HD 72359	08 27.2	+10 24	23 14	23 49	2 31W	+10 08	"	7-7-7
48302	HD 94118	10 46.7	+46 20	23 54	01 22	1 45W	+45 50	"	7-7-7
48303	HD 124897	14 11.1	+19 42	01 27	01 51	1 09E	+14 15	"	11-11
48303F	Focus Test		+19 42			109E	"	Fe/-	18-18

Spectr. Temp. +22°F Dome Temp./Hum. +28°F/60% Transparency Conditions hazy

Focus 514

Spectr. Temp. +30°F Dome Temp./Hum. +24°F/60% ?

174

Exp. Mtr. (B Filter)	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—	—	—	—	BC	~~N1200/50~~	BS	~~IIaD~~	B	Sha Here!		
80/123	1"	6.8-7.8	F2 IIaJ	BC	N 1200/50°	BS	IIaD e	A	Bin Cap -Ly		sl weak
							IIaD e				
40/80	1"	~7	G8 III	BC	N1200/50°	BS	IIaD e	B	++K+ -Ly	broken (≈2" lost) Main pc saved	fine
40/85	<1"	6.87	F2 V	"	"	"	"	A	SB Ly	(T=+32°F still)	good
40/75	"	6.2	A0 I	"	"	"	"	B	SB-Ly		good
40/82	"	7.1	A2	"	"	"	"	A	SB-Ly		good
40/64	/	/	K2 III p	"	"	"	"	B	Std Std.	thought thick by	fine
				"	"	"	IIaO	A			right on

175 Fri-Sat Reticon testing

Date Mar 23-24 /84 Observers W Ir - Tn

Emulsion Batches:

Plate No.	Object	R.A. 1950	Declination 1950	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	B Gem			21 10		W			
	S Leo			22 28					
6	C Vn	1225-1	+39 06	23 17	23 47		18.3 cts	1/10 min	
								may have been some fo Nb for a few seconds during Stellar exp.	

Spectr. Temp. ..... Dome Temp./Hum. 23°F/..80% Transparency Conditions ..V..s.l..hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...../..90% Reticon ..1 Seeing 2" good 176

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Time	T.H. Temp	Program	Remarks	Quality
20/30cts/min				BC	1200/41.5°	250μ	20:50	-94.1			
20/26cts/min		V= 2.56	A4I	"	"	"	21:08	-95.0	frost on window (dew)		
20/183cts/min		V= 5.0	G8 III-IV	"	"	"	21 20	-95.7		TV threshold 2.5V	ideal 2.9V
							21 26	-96.0	frost		
							21 44	-96.8			
							21 48	-97.0	moved		
							22 06	-92.0	no frost		
							22 17	-90.3			
							22 39	-90.6	H=88%		
							22 51	-91.2			
							23 04	-91.7	no frost		
							23 20	-89.9	moved		
							23 32	-90.6			
							23 43	-91.2			
							23 49	-96			
							00 04	-92.0		Last Forbes int	

177 Sat-Sun

Date Mar. 24-25/84 Observers Ly.-Tu./Tu.-Lin...

Emulsion Batches:
8" 68° IIa-O 06103 71034
5" 68° IIIa-J 31083 07024

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48304	HD 44990	06 19.8	+07 08	19 05	20 07	1 35W	+7 08	Fe-	7-7-7
48305	HD 39743	05 49.4	+49 01	20 12	21 35	3 31W	+49 05	"	7-7-7
48306	HD 65041	07 51.7	+43 47	21 39	22 29	2 25W	+43 35	"	7-7-7
48307	HD 72359	08 27.2	+10 24 04	22 32	23 13	2 34W	+10 09	"	7-7-7
48307T	Spot Calib	for 4830	4-10		15 min @ 15V	D4 3900	D3 4300	D3 +10	
48308	HD 88021/2	10 03.8	+20 49	23 17	01 07	2 55W	+20 27	Fe-	7-7-7
48309	HD 94118	10 46.7	+46 20	01 13	02 22	3 25W	+45 55	"	7-7-7
48310	HD 118216	13 30.3	+37 42	02 31	02 43	1 03W	+	"	10-10
48311	HD 138749	15 28.9	+31 42	02 45	03 06	0 32E	+	"	20-20
48312	HD 134897	14 11.1	+19 42	03 09	03 13	0 51W		"	20-20
48312T	Spot Calib	for 4831	1/12		15 min @ D4	17.5V 3900	15V 4300	15V 4310	
48313F	Focus					0 [illegible]W	+ 20°		

Spectr. Temp. .t.36.9°..... Dome Temp./Hum. 132°/.60% Transparency Conditions ..Fine.....

Focus .....514.....

Spectr. Temp. ..... Dome Temp./Hum. 124°/.70.6

178

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/48	1"	6.8-7.8	F2 I-II	BC	N 1200/50.3°	BS	IIa O-e	A	Bm Cep-Ly	TV Th-Ar 2.5V	fine
40/20	1"	≈7	G8III	"	"	"	"	B	H ε	2.7V	
20/78	1"	6.9	F2V	"	"	"	"	A	Sp Bm-Ly	2.9V +36°F reset to 513	
40/81	1"	6.2	A0V	"	"	"	"	B	Sp Bm-Ly	2.6V	
							II				
40/120	1"-4"	7.20	G5 + A2	BC	N 1200/50.3°	BS	"	A	VB-Blu	2.9V sudden seeing change	
40/60	2"	7.13	A2	"	"	"	"	B	SB - Ly	3.2V	
20/38	1-2"	4.9	F2IV	"	"	"	"	A	Bm Ly	2.4V Set 514 T 32°F	
20/150	"	4.10	F5m	"	"	"	IIa J-e	B	Bo-Blu		fine
10/73	1"	1	K2	"	"	"	"	A	Stdvel		sl sth.
							IIa J-e				
				BC	N 1200/50.3°	BS	IIa O	B	set 514	T 32°F	sl red

179

Date Sun:Mon..Mar 25-26/24 Observers .Kly...Tn.....

Emulsion Batches:
5"-68° ..IIIa-J-e..31083-07024
8"-68° ..IIIa-O-e..06103-11034
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr
48313	HD 47105 8 6cm	6h 31.m9	+16 29	~19 17	19h 27m	1h 12m W	+16 27	Fe Ne/ Wide	10-15	30/
48314	HD 58715	7h 21.7	+8 29	19h 29	19h 50	0031E	+8 27	"	10	
48315	HD 76644	8 52.0 -2.4-	+48 26	19h 56	20 23	0037E	+48 08	"	10	
48316	HD 89025	10h 11.1	+23 55	20h 26	21 16	102 E	23 32	"	15-12	
48317	HD 89021	10 11.1	+43 25	21 20	21 51	0028E	+43 02	"	10-7	
48317T	Spot Calib	for 48313-20		15 min @ 15V		3600 D4	3900 D4	4300 D3		
48318	HD 95689	10 57.6	+62 17	21 57	22 22	0044E	+62 52	Fe Ne/ Wide	10-10	
48319	HD 97603	11 08.8	+21 04	22 27	22 52	0024E	+20 39	"	10-10	
48320	HD 97633	11 09.0	+15 58	22 54	23 22	0007W	+15 33	"	10-10	
48321	HD 95735	10 57.9	+36 38	23 30	01 44	0240 W	+36 08	Fe/-	7-7	
48321T	Spot Calib	for 48321		15 min @ 15V		D3 3600	D3 3900	D3 4300		

Spectr. Temp. +38°F Dome Temp./Hum. +32°/59% Transparency Conditions ..v. sl. hazy

Focus 5125

Spectr. Temp. 32°F Dome Temp./Hum. +27°F/59%

180

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/80	1"	U= 2.0	A0 IV	BC	N1200/47°	150/5	IIIaJ-e	B	KK UV	(UV filter above slit on all UV exps)	fine
20/84	"	U=2.5	B7V	"	"	"	"	A	"		fine
20/90	"	U= 3.40	A7V	"	"	"	"	B	"		fine
20/90	"	U= 3.95	F0III	"	"	"	"	A	"		fine exc. scratches
20/9	"	U= 3.54		"	"	"	"	B	"	broken 2pcs	v sl. str-
							"				
20/92	"	U= 3.81	G5 II-III	BC	N1200/47°	150/5	IIIaJ-e	A	KK UV		fine exc. scratches
20/100	"	U= 4.20	A4V	"	"	"	"	B	"		fine exc. scratches
20/54	"	U= 4.2	A2V	"	"	"	"	A	"	T= 35°F Set 5	fine
200/130	2"	V= 760	M6	"	N1200/50.3°	BS	IIaO-e	B	A-M KK		weak
* I4-I4		was D3 instead of D4					"				

181 #1

8m 68° Emulsion Batches: IIa-D: e 06103 -24034

Date Mon. Tue. Mar 26-27/84 Observers ..Gry..Tm.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48322F	Focus test					0	+10	Fe/-	17-17
48322	HD 27819	04 18.3	+17 13	19 17	19 41	3 19W		"	10-16
48323	HD 28319	04 22.9	+15 39	19 48	19 54	3 27W		"	10-1
48324	HD 33111	05 02.9	-5 13	19 59	20 04	2 59W			10-1
48325	HD 73819	8 35.2	19 56	20 18	21 24	0 45W	+19 38	"	7-7
48326	HD 72576	8 34.0	19 38	21 29	23 55	3 17W	+	"	7 7 7
48326T✓	Spot Calib	for 48322-326		15 min @ 15V		D4 3400	D3 4320	D2 4810	
48327	HD 70313	8 16.2	53 33	00 02	00 39	4 17W	+53 15	Fe/-	10-12
48328	HD 87696	10 01.5	35 44	00 43	00 57	2 52W	+	"	10-10
48329	HD 102647	11 44.0	15 08	01 01	01 04	1 17W		"	10-10
48330	HD 107966	12 19.3	+26 39	01 08	01 39	1 17W		"	10-1
48331	HD 118098	13 29.6	-0 05	01 44	01 53	0 21W		"	10-1
48332	HD 136202	15 14.2	+7 09	01 56	02 24	0 53E		"	10-10
48333	HD 103095	11 47.2	+38 26	02 33	03 43	3 55W	+37 49	"	7-7
48334	HD 118216	13 30.3	+37 42	03 48	04 09	2 38W		"	10-12

Spectr. Temp. 37°F Dome Temp./Hum. +32°/60% Transparency Conditions .. Fine ... v.s.l. hazy ...

Focus ... 513 - 514 ...

Spectr. Temp. ... Dome Temp./Hum. 42%/ ...

182

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
—				BC	1200/49°	BS	IIa-O	A	(* Flare? Sanford Eq plate exp probably cool		* bad
70/70	2"	4.95	A3 V	"	"	"	IIaJ-e	B	A stars		fine
60/60	"	3.58	A7 III	"	"	"	"	A	"		fine
60/60	"	2.92	A3 III	"	"	"	"	B	"		fine
120/120	"	6.95	A7 III IV	"	"	"	"	A	"		fine
30/240	"	7.87	A7 IV	"	"	"	"	B	"	T=35°C	slwk
							"				
60/60	2-4"	5.51	A3 V	BC	1200/49°	BS	"	A	A stars	(re perfect)	Fine
60/60	3"	4.66	A7	"	"	"	"	B	"		fine
60/60	2"	2.23	A3 V	"	"	"	"	A	"		fr sl str sl str
60/60	2"	5.26	A3 V	"	"	"	"	B	"		fine
90/90	2"	3.48	A3 V	"	"	"	"	A	"	re v sl str " sl str	fine fr v sl str
60/53	"	5.6	F8	"	"	"	"	B	sl/vel	KA oscillat. @ 3 55W	fine
40/73	2"	7.2	G8 V	"	1200/50.3	"	"	A	A sm Sp	set 514 T = 30°	fine
60/57	2"	4.9	F2 IV	"	"	"	"	B	Lg prog		fine

1983 #2

Emulsion Batches:

Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48335	HD 118216	13 30.3	+27 42	04 10	04 28	2 57W	+37 14	FC1-	10-10
48336	"	"	"	04 29	04 47	3 16W	"	"	10-10

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. 30°F..... Dome Temp./Hum. 20°F/90% 184

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/50	2"	4.9	F2 IV	RC	120d/50Å	BS	IIaO-E	A	Ly Proj		Fine
0/52	"	"	"	"	"	"	"	B	"		"
		Looked at Pins									

Comparison Filter Exp

185 Tues-Wed Reticon Testing

Date Mar. 27-28, 84 Observers W.L.-T.M.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	B Gem	7 44.4	+28 04						
	40 Leo	10 18.9	+19 33					Mirror 20X	→
	HD 86801	10 00.7	+28 39	21 17	22 17		+28 39		
	8 UMa	11 53	+53 47	≈	1min				
	ε UMa	12 53.3	+56 03						
	"	"	"						
	HD 119216	13 33.9	+37 17	00 39		0 30E			
	HD 132737	14 59.2	+27 13	02 52	3 58	0100W			
	β Lyr A	18 49.4	+33 21	04 20	4 27	E			

Spectr. Temp. ..... Dome Temp./Hum. +30°/62% Transparency Conditions .. Clouds South ... Hazy Moon

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +27°/88% 186

Exp. Mtr.	Seeing	Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
?	2"	1.14	KO III b								
10/85	2"	4.79	FG IV	(5 cts/min with		B filter)	(5 cts/min Hα			T = −90.2°C	
						(5 cts in 12 min) Hα filter					
80/47	2"	8.9	GO V	Hα Filter			T −92.6°C			N star at pair Thin cloud	
10/			16 cts/min	Hα Filter			filter	F. Hα	Filter	filter	Filter
							B	Hα	5450	3600	3900
		1.77	AO pv				↓	↓			
10/		"	"	BC	1200/36°	350u	48/min	31/min			
10/	B=4.9		F2 IV	"	1200/32°	"	2.9/min	2.8/min	3.9/min	0.5/min	0.9/min
80/83	1"	V 8.02	KO III	"	"	"		/min		1	1.3/min
10/	1"	V 3.38	β^{5-1}_{A}	"	1200/418	"		7.4/min			2.0/min

197

Date Sat. Sun. Mar 31 - Apr 1/84 Observers Kly. - T.n

Emulsion Batches:
IIIa J-e 31083 - 28034 fg
IIaO-e 06103 - 27034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48337	HD 47105	$6^h 31^m.9$	+16 29	$19^h 18^m$	$19^h 21$	1 06 W	+16° 26'	Fe/-	20-20
48338	HD 56986	7 14.1	+22 10	$19^h 28$	19 42	0 44 W	+22 02	"	20-20
48338T	Spot Calib	for 48337	-38, 43,	45-46,	15 min @ 04	17.5V 3900	15V 4300	15V 4810	
48339	HD 66751	7 59.9	+70 00	19 47	21 08	1 20 W	+69 48	Fe/-	7-7-7
48339T	Spot Calib for	48339	-42, 44,	47	15 min @ 15V	D4 3900	D3 4300	D2 4810	
48340	HD 95735	10 57.9	+36 38	21 20	0105	2 24 W	+36 06	Fe/—	7-7-7
48340F	Focus test					1 20 E	+19 17	Fe/—	20 20
48341	HD 114897	14 11.1	+19 42	1 10	1 11	1 19 E	+19 17	Fe/-	10-10
48342	"	"	"	1 18	1 19	1 11 E	"	"	"
48342F	Focus test					1 10 E	"	Fe/-	20-20
48343	HD 121370	13 49.9	+18 54	1 28	1 33	0 01 W	+18 29	Fe/-	20-20
48344	HD 130948	14 45.8	+24 20	1 42	2 37	0 09 W	+24 00	Fe/-	7-7-7

Spectr. Temp. ....43°.... Dome Temp./Hum. 40°/57% Transparency Conditions . Fine ... slowly ....

Focus ....512.5....

Spectr. Temp. ....38.... Dome Temp./Hum. 30°/72% Aurora by 23h 188

Comparson Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		10/48	1-2"	2	AOTV	BC	1200 s 5°3	BS	IIaJ-c	A	KK AsmSp		fine
		10/40	"	3.9	FOIV	"	"	"	"	B	"	Fe slit exp vs slit	
									"				
		40/103	2"	6.6	dF8	BC	1200/ 50°3	BS	IIaO-e	A	KK AsmSp		fine
									"				
		200/177	1-3½"	8	M6	BC	830/40.2	BS	IIaO e	B	KK AsmSp	Still set 512.5 T= 40°	flare
						"	"	"	"	A			fine
		10/26		1	K2	"	"	"	"	B	Still set	T= 38.5	strong
		10/38		"	"	"	1200/50.3°		"	A			
						"	"	"	"	B		still set 512.5	contrast
		10/46	2-3	2.8	G0	"	"	BS	IIaJ-c	A	AsmSp KK		fine
		40/91	3-4	6.0	dG2	"	"	"	IIaO e	B	AsmSp KK	T= 38°	fine

189 Sun-Mon

Date Apr. 12. 84 Observers KK-Tm

Emulsion Batches:
IIaJ-e 31083 – 28034 fy
IIaD-e 06103 – 27034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48345F	Focus test					0 20W	+16 28	Fe/-	20-20
48345	HD 47105	06 31.9	+16 29	19 16	19 20	01 09W	+16 28	Fe/-	20-20
48346	HD 89025	10 11.1	+23 55	20 48	20 57	0053E	+	"	20-20
48347	HD 79096	09 06.8	+15 24	21 03	2204	01 18W	+	"	7-7
48348	NGC 2632	!			2235	02 20W			
48349	Vy s 534	08 45.3	+8 14	22 46	23 15	0253W	+7 55		
48349T	Spot calibration	(1) S450	D4 15V	2m (3)	S450 D3	15V 2m			
48350	Σ 1523	11 12.9	+32 06	23 28	23 40	W	+31 39		

Spectr.
Focus
Spectr.
Exp. Mtr.
10 44
1/50
4/30

Spectr. Temp. 48°F Dome Temp./Hum +43°/53% Transparency Conditions . Fine

Focus 511

Spectr. Temp. .! Dome Temp./Hum +36°/75%

190

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/5003	BS	IIaO e	B		T=48F Se+511	Cont red
10/44	1"	1.9	A0 IV	BC	1200/5003	"	IIIaJ-e	A	Asa Sp-Kk		
10/50	1.5"	U= 3.95	F0 II	"	"	"	"	A	"		
40/80	"	7.0	dG7	"	"	"	IIaO-e	B	"		
	piggyback too				dbl star camera		IIG			2.5, 25; 6.3, 35	2.5 dk
TRAIL G	Hya at	23:23			"		II-G			6.3, 16, 40, 16, 20	16 dk
							II-G				strong
TAIL [illegible]					"		II-G			0.4, 10	strong

191 Big Astro Tour Looks at NGC 2392

Mon-Tues

Date Apr. 2-3/84 Observers Ty - Bn (initials)

Emulsion Batches: IIaO-R 06103 - 11034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48351	HD 88021/2	10 038	+20 49	21 54	00 14	2 35W	+20 26	Fe/-	7-7-7
48351T	Spot Calc for	48351 - 52		15 min @ 15V		D4 3900	D3 4300	17 4810	
48351F	Focus test						+20 26	Fe/-	17-17
48352	HD 103095	11 472	+38 26	00 27	01 59	2 36W	+37 53	"	7-7-7
48353	HD 136 202	15 14.2	+2 09	02 05	02 31	0 17E	+1 51	"	10-10
48353F	Focus test					"	"	"	20-20

Spectr. Temp. +44°F ..... Dome Temp./Hum. +38°/70% Transparency Conditions ... slightly cloudy .....

Focus ..... 5.11 ... 5.12 .....

Spectr. Temp. ... 40°F ..... Dome Temp./Hum. +30°F/77%

192

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/123	2-3	7.2	965 +42	BC	830/40.2°	BS	IIaO-e	A	VB Bln		Fine
							IIaO-e				
				BC	830/40.2°	BS	IIaO-e	A		T=42°F Set 511	cont sl blue
40/98	2"-3"	7.2	G8 VI	"	1200/50.3°	"	"	B	Asm Sp	Set 512	v sl wk
20/40	3-5"	5.6	F8	"	"	"	IIaO-e*	A	Std Vel	(*d. Hand batch)	sc scratch Fine
				"	"	"	"	B		Set 572 T=48°F	sl red

193 Mon-Tues

Date April 9/10 1980 Observers WLH

Reticon

Emulsion Batches:

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
–	EUMA								
–	FO Vir								
Tues Wed Apr 10-11/84			N 11-Tu	Reticon use at 1800				Isolux grating,	
	P CVn	12 33.1 (1980.4)	+41 26	21 12			+	FNo 1	
	B Com	13 11.2	+27 57	22 54		(30 mins very good)		"	"
	BS 5107	13 33.9	-0 31						
	FO Vir	13 28.9	+1° 11						
	HD 124897	14 15	+19 17						
	B Lyr	18 49.5	+33 21		(10 min good)				
	HD 184927	19 34.7	+31 15	04 16	04 59				
	Focus test			Comparison Stellar				FNo	4-4

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					Dome Temp 58°F/Hum 51% (Begining)						
T/t				Blue Filter		3600		4500	5750	Hz	7680
50/44.5	2"	4.85	GOV	20/27 (5 min)		20/5.4 (4 min)		20/2 (2 min)	20/33 (4 min)	20/18 (25 min)	200/11 (5 min)
"	3"	4.83	GOV	20/108	(20 min)	20/58	(4 min)	20/2	(2 min)	20/48 (6 min)	20/30 (5 min)	200/21 (10 min)
80/56.5	4"	3.48	A3V	20/40	(3 min)						
"	3"			80/29	(8 min)	80/6	(4.3 min)	80/5	(12.7 min)	80/32 (5.0 min)	80/36 (10 min)	Cloud at end
"	2-	1	K								
"	2-3"	3.95	Type	20/16	(1 min)	20/10	(5.1 min)	20/5	(5.5 min)	20/13 (1 min)	20/135 (2 min)	20/1 (4.7 min)
											200/11 (5 min)
120/58.5	2-3	7.30	F2V							200/106	
			Spectrograph Temp = 40°F								
					End Dome Temp +34°F H = 57%						

195

wed-Thurs

Date Apr. 11-12 1984 Observers Wlr-Tn

Emulsion Batches:

Plate No.	Object	R.A. 1984	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp. Mtr
	FO Vir	13 28.9	+1 11	23 29	00 42	00 18W	+1 12			40/150
	B Com	13 11.2	+27 57	01 34	01 36		+			20/90
	"	"	"	01 36	01 40					20/77
	"	"	"	01 40	01 48	01 42W	+27 58			20/150
	"	"	"	01 48	02 04					40/300
	"	"	"	02 04	02 36					20/540

Spectr. T
Focus
Spectr. T

Spectr. Temp. +50°F ..... Dome Temp./Hum. 48°F / 55% Transparency Conditions ..Sl. hazy.....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 41°F / 73% 196

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion Exp f. Her	P.H.	Program	Remarks	Quality
40/150	1"			BC	1800/58°5	250μ	Hα		Reticon		OK
20/90	1"	4.83	GOE	"	1800/41°5	"	Blue Reg		"		
20/77	1"			"	"	"	"		"		
20/150				"	"	"	"		"		
20/301				"	"	"	"		"		
20/540											

197 Thurs-Fri

Date Apr. 12-13. 1984 Observers Bjo - Tn - Jrg - Wlr

Emulsion Batches:

Plate No.	Object	R.A. 1900 84	Declination 1900 84	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	HD 87696	10 06.5	+35 19	20 06.5	20 16.5	E	+35 20	FeNe ND 1	12
	"	"	"	20 16.5	20 36.5	0 23 E	"	"	12
	HD 73819	08 40.3	+19 38	20 49.3	22 03.5	2 32 W	+	"	12
								Fe/- ND 1	3
	HD 87901	10 07.5	+12 03	22 47.7	22 54		→ too much	FeNe	4
	"	"	"	23 03	23 17	W	correct →	"	2"
	"	"	"	23 17	23 29				
	"	"	"	23 45.4	00 01.7	2 3½ W		ND 1 FeNe	1"

pectr. Temp. ..... Dome Temp./Hum. 4507/503 Transparency Conditions ...getting cloudy.....

ocus .....

pectr. Temp. ..... Dome Temp./Hum. 42/703

198

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion filter	P.H.	Program	Remarks	Quality
200/8	4			BC	830/37°75	250μ	7680			} Forgot V filter	
200/195	3"			"	"	"	"		-88.8 Ref Temp		
300/32	2"3"			"	"	"	"		-92.0°C		
				"	"	"	"			OK Comp for previous exp	
20/85	2"			"	1800/56°5	"	Hα		-92.8	Ideal for Hγ HeI	
20/200	2"	1.2	B&V	"	1800/56*	"	"		-92.6	*Ideal for Hα	
0/200					"				-92		
0/15	3"			BC	1800/45	250μ	4500		-92.1	cloud	

199 Wed Thurs

Date Apr. 25-26 1984 Observers W.Ir.-T.a

Emulsion Batches:

Plate No.	Object	R.A. ~~1900~~ 1983.4	Declination ~~1900~~ 1983.4	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
1	FO Vir	13 28.9	+1° 11	22 22	23:22	0 07E		# 54 filter FeNe	2
2	FO Vir	" "	" "	23:28	00 29	1 00W	+	"	2-2
3	HD 118098	13 29.6	-0 5	00 53	01 08	1 37W		#6 clear FeNe	10
4	"	"	"	01 13	0128	1 52W		"	10-10
5	R Lyrae 1983	18 54.8	+43 56	02 54	0309	1 46E		#6 FeNe	2
6	"	"	"	0313	03 28	1 28E		"	2-2
								#6 Cont	60
7	P Cygni 1983	20 17.2	+37 59	03 46	04 01	1 44E		#6 FeNo	0-2
8	HD 190918	20 2.2	+35 31	04 10	0439	1 23E		"	2

Spectr. Temp. 55°F Dome Temp./Hum. 54°F/63% Transparency Conditions Sl. hazy

Focus

Spectr. Temp. / Dome Temp./Hum. /

Good Aurora

Reduced Counts

200

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	Plt.	~~Program~~ Exp. meter & filter	Remarks	Quality
40/92	1-2"	V= 6.7	A2V	BC	1800/36.5°	250μ	T=-89.6°C	1150	Hα filter		OK
40/83	"	"	"	"	"	"	T=-92.5		" "		OK
20/337	"	V 3.37	A3V	"	1200/47.25°	250μ	T=-92.8	2330	V filter only.	(nothing in Exp. meter)	Fine
00/36	"	"	"	"	"	"	T=-92.7		7680+V filter	for T-40 only	Fine
0/13	2-3"	V 4.5	gMe	"	1800/41.5°	"	T=-88		4300 Note	½ less put in plus a blue	
0/15	"	"	"	"	"	"	T=-98.9	821	"	for rest of night. 5Li.f	
IIG cont	170	secs	be	filter	"	"				(both too faint)	
0/21	2"	V 4.8	Blp	BC	"	"	T-98.3	1087	4300		OK
00/40	2-3"	P 7.60		"	1800/44.5°	"	T=-88.9	1260	4300		OK

201

Date Apr. 26-27 Thurs. Fri. 84 Observers W. Ir. - T. n.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
1	HD 89449	10 14.3	+19 59	21 16	21 51	1 35 W	+19 34	#6 FeNe	2-2
2	"	"	" "	21 56	22 44	2 28 W	"	"	2
3	FO Vir	1983.4 13 28.9	+1° 11	23 02	23 43	0 17 W	+	#5 FeNe	2-2
	Flexure tests								

Spectr. Temp. ..... Dome Temp./Hum. 52°F/80% Transparency Conditions Some cloud ... V. hazy ....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

202

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	~~Emulsion~~ Temp	P.H.	~~Program~~ Exp meter filter	Remarks	Quality
	20/160	3"-6"	5·3	FG IV	BC	1800/41·5°	·3mm 250μ	−100°C		Reg Blue	cloud (clear later)	
	0/320	"	"	"	"	"	"	−100·9		"	more cloud mid Exp	
	3/84	4"	V 6·7	AD V	"	1800/56·5°	"	−96·1		Hα	cloud cloud	

203

8m 68 Emulsion Batches: IIaO.e 06103 – 27134
*IIaO.e 06103 – 03044

Date Fri: Sat Apr 27-28/84 Observers K.L.y. – T.n.

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48354	HD 99028	11h 18.7m	+11° 5'	20:26	20 46	00 30E	+10° 38'	Fe/-	7-77
48355 ✓	HD 103095	11 47.2	+38 26	20 50	23 07	1 24W	+38° 52	"	7-7-
48355T	Spot Calib for 48354 – 48356				15 min @ 15V	D4 3900	D3 4300	D3 4810	
48356	HD 137909	15 23.7	+29 27	23 11	23 41	1 39E	+29 11	Fe/-	7-7-7
48357 ✓	HD 130948	1445.8	+24 20	23 44	00 28	00 13E	+23 59	"	7-7-
48357T ✓	Spot Calib for 48357				15 min @ 15V	D4 3900	D3 4300	D3 4810	
48357F	Focus test					0 0	–8°	Fe/-	3737

Spectr. Temp. ..62°f..... Dome Temp./Hum. 60°f/58% Transparency Conditions ...hazy...clearing.....

Focus .....504.....

Spectr. Temp. ..60°f..... Dome Temp./Hum. 55°f/60% New D19 204

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/53	1-2	4.3	F IV	BC	1200/50°3	BS	IIaO-e	A	AsmSp-KK		fine
40/86	1-3"	7.2	G8 VI	"	"	"	"	B	"	cloud	good
							"				
40/106	3"	3.9	F0p	BC	1200/50°3	BS	"	A	AsmSp-KK	cloud	fine
30/161	2"	6	dG2	"	"	"	IIaO-e*	B	"	real cloud at end	good
							"				
				BC	1200/50°3	BS	IIIaJ-e*	A	*...fog*...of 28034 plates in separate IIIaJ expbox		sl blue wide

205 Sun-Mon

Date MAY 6 7 /84 Observers Sch-Tn

8" 68° Emulsion Batches: IIa-e 06103 -03044

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48358	HD 117362 FO VIR	13247	+1 36	20 15	22 10	00:36 E	+1° 12'	Fe/-	7-7
48358T	Spot Calib	for 48358-			15 min @ 15V	D4 3900	D3 4300	D3 4210	
48359	HD 117362 FO VIR	13 247	+1 36	22 13	0:18	1:32 W	+1 12	Fe/-	7-7
48360	HD 145001	16 03.6	+17 19	0:23	1:25	0:02 W	+17 04	"	7-7
48361	HD 117362	13 247	+1 36	1:35	2 15	3 35 W	+1 12	"	7-7
48361F	Focus test					0 0	"	"	12-17

Spectr. Temp. +58°F Dome Temp./Hum. +54°F/66% Transparency Conditions hazy-?-cloudy

Focus 508 - 510

Spectr. Temp. +53° Dome Temp./Hum. +47°F/85%

206

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/95	2-3"	6.7	A2V	BC	830/40.2°	BS	IIaD-e	A	Var Sch		fine
							IIaO-e				
80/148	3"	6.7	A2V	BC	830/40.2°	BS	IIaO-e	B	Var Sch	getting cloudy	fine
40/85	3"	6.72	G8III	"	"	"	"	A	Std Sel		fine
80/33	2-4"	6.7	A2V	"	"	"	"	B	Var Sch	cloud then	weak
				"	"	"	"	A	Set 510	T=53°F	vsl blue

207

Date MAY 13/14 Observers Tan - Sch

Emulsion Batches: IIa-e 06103-03044

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48362	HD 117362 FO VIR	13 24.7	+1 36	22:17	00 15	1 57W	+1 13	Fe/-	7-7-7
48362T	Spot Calib for 48362				15 min @	15V 3900 D4	D3 4300	D2 4810	
48363	FO VIR	13 24.7	+1 36	00:16	02 00	3 42W	+1 13	Fe/-	7-7-7
48364	HD 145001	16 3.6	+17 19	02 04	02 47	1 50W	+17 04	"	7-7-7
48364F	Focus Test					"	"	Fe/-	24-24

Spectr. Temp. +46°F ..... Dome Temp./Hum +42°/98% Transparency Conditions hazy ... sl. foggy .....

Focus .....513.....

Spectr. Temp. +42.5°F ..... Dome Temp./Hum +34°F/100% Then much to Hor

208

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
50/140	3"	6-7	A2V	BC	830/40°2	BS	IIaO-e	A	Var Sch		
							"				
/207	2-3"	6-7	A2V	BC	830/40°2	BS	"	B	Var Sch		
70/50	"	6-12	G8V	"	"	"	"	A	std vel	T=43°F	
				"	"	"	"	B	T=425°F	so+513	

209 Mon - Tues

Date MAY 14-15, 184 Observers T.n

8" 68° Emulsion Batches:
IIa-O-e 06103 - 03044 focus test
5" 68° IIa-O-e 06103 - 14054
IIIa-J-e 31083 - 28034 fg

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48365	F1 Focus test					0 10W		Fe/-	22-2
48365	F2 Focus test					0 10W		Fe/-	22-2
48365	J 36 Lyn HD 79158	09 07.3	+43 38	20 17	22 04	4 05 W	+4319	Fe/-	10-25
48365	T Spot Calib for 48365, 48370, 71			15 min @ D4	17.5V 3900	15V 4300	15V 4810		
48366	HD 99028	11 18.7	+11 05	22 11	22 48	2 38W	+1038	"	15-15
48367	HD 122742	13 58.6	+11 16	22 55	00 46	1 58W	+1054	"	10-10
48367	T Spot Calib for 48366-67, 68, 69, 72, 73			15 min @ 15V		D4 3900	D3 4300	D2 4810	

Spectr. Temp. 50.5°F ..... Dome Temp./Hum. +47°F / 70% Transparency Conditions . cloudy & hit .....

Focus .... 513 .....

Spectr. Temp. 46°F ..... Dome Temp./Hum. +40°F / 90% 210

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
B + Hartmann				BC	83.2/40.3°	BS	IIaO	A		set 513	ok
				"	120/60.3°	"	IIaG	B		set 511	sl red
20/160	1"3	5.18	B8II	"	"	"	IIaJ-e	B	blue grey	cloud at beginning	exp fine comp thin fuzzy
							"				
20/77	2.3	4.34	F2IV	BC	120/50.3°	BS	IIaF* e	A	Dan Gp KK	T: 49°F Set 508	fine
20/77	1"2	6.8	G8V	"	"	"	"	B	" "	cloud	good
							"				

21 Tue-Wed

Date MAY 15/16/89 Observers H.K.-Tm.-Kly

Emulsion Batches:
dev. with prev. night IIa-e 06103 — 14[illegible]
IIIa-J e 31083 — 28034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
48368	HD 122743	13h 58m6	+11° 16′	21 20	23h 4T	1 03W	+10 53	F-L	10-15
48369	HD 140538	15 39.1	+ 2 50	23 51	1 16	0 52W	+2 34	"	10-10
48370	HD 137909	15 23.7	+29 27	01 18	1 43	1 35W	+29 11	"	22-2
48371	HD 209790	22 00.9	+64 08	01 50	2 36	4 08E	+64 33	"	27-2
48372	HD 158633	17 25.3	+67 24	02 43	4 05	2 00W	+67° 19′	"	7-7
48373	HD 186791	19 41.5	+10 22	4 10	4 18	0 007E	+10 36	"	11-1
48373F	Focus	test				"	"	"	22-2

Spectr. Temp. 47°F Dome Temp./Hum. 47°/69% Transparency Conditions Fine after Rain

Focus 508

Spectr. Temp. 41.5°C Dome Temp./Hum. 36°F/69%

212

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/122	2"-3"	6.8	G8V	RC	1200/503	BS	IIa-0-e	A	Asm Sp		fine
40/100	2-3"	6.6	dG5	"	"	"	"	B	"	Sol 509 T= 45°F	fine
20/135	"	3.93	F0p	"	"	"	IIIa-J-e	A	"		fine
20/1:7	"	4.64	A3m	"	"	"	"	B	"	xx Cloud f H0 OK	fine double lined
40/75	"	7.1	dK1	"	830/402	"	IIa-0-e	A	"	T=43° Sol 514	fine
20/40	"	4.1	K3II	"	"	"	"	B	std vel		strong comp strong
								A	prob flared	Sol 514	v sl. blue

213

Date Wed. THURS. MAY 23-24/84 Observers T.n. K.L.y.....

8m 60° Emulsion Batches: II-a-E 06103 - 14054
5m 68° III-a-J-F 31083 - 16054
IV.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	E
48374F	focus test					0 0		Fe/-	20-
48374	HD 81797	9h 22.7m	-8° 14'	20h 22m	20h 38m	3h 02W	-8° 34'	Fe/-	12-
48375	HD 99028	11h 18.7	+11 05	20 45	21 05	1 31W	+10 40	"	12-
48376	HD 103095	11 47.2	+38 26	21 08	22 59	2 56W	+37 52	"	9-9
48376T	Spot Calib for 48374			77,80		15 min @ 15V	D4 3900	D3 4300	D2 4800
48377	HD 140538	15 39.1	+2 50	23 05	01 29	1 35W	+2° 36'	Fe/-	9-9
48378	HD 137909	15 23.7	+29 27	1 33	02 05	2 28W	+29 12	"	22-2
48379	HD 209790 **	22 00.9	+64 08	2 11	03 37	2 36E	+64 35	"	22-
48379T	Spot Calib for 48378-79					15 min @ D4	175V 3900	15V 4300	15V 4800
48380	HD 186791	1941.5	+10 22	3 42	04 01	0 06W		Fe/-	12-6
48380F	Focus test					11	+10 39	Fe/-	

Spectr. Temp. 64°f ..... Dome Temp./Hum. 60°f./63% Transparency Conditions ... fine - thin cirrus

Focus ..... 507 - 504 .....

Spectr. Temp. 53°f ..... Dome Temp./Hum. 46°f./63%

* Plate holders mixed (A tops B bottoms) At least for plate #s 75 & 76

214

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/40.2	BS	IIaO	A*	set 504	plate 507?	red
20/32	3"	2.2	K3II-III	"	"	"	IIaO-E	A*	STD VEL		strong comp lines
10/52	3-6	4.0	F2IV	"	1200/503	"	"	B*	AsmSp KK	T=63°f set 504	fine
30/143	3-4"	7.2	G8IV	"	"	"	"	A*	"	condition of scope	good
							"				
40/101	3-6"	6.6	dG5	BC	1200/503	BS	IIaO-E	A	AsmSp KK	T=58°f set 505	fine
0/121	3"	3.9	F0p	"	"	"	IIIaJ-E	B	"		fine
0/121	4"-5"	4.6	A3m	"	"	"	"	A	"	T=55°f set 507 OK	
							"				
20/40	5"	4.1	K3II	BC	1200/503	BS	IIaO-E	B	std vel		fine
				"	"	"	IIIaJ-E	A	set 507	* old color of IIIaJ	

215 Sat-Sun

Date MAY 26-27/84 Observers Sch-Tu

8m 68° Emulsion Batches: Ila0-E 06103 - 23054 .20 1.98

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48381	HD 117362	13 24.7	+1 36	22 45	00 47	3'20 W	+1°12'	Fel-	7 7 7
48381T	Spot Calc for 48381 —	84		15 min @ 15V		D4 3900	D3 4200	D2 4800	
48382	HD 158633	17 25.3	+67 24	00 55	03 09	1 46W	+6722	Fel-	7 7 7
48383	HD 196524	20 32.9	+14 15	03 15	03 27	1 07 E	+	"	10-10
48384	HD 186791	19 41.5	+10 22	0330	0345	0 03W	+	"	10-10
48384F	Focus test					"	"	"	20-20

Spectr. Temp. 60°f ..... Dome Temp./Hum. 49°f/83% Transparency Conditions .. Some Cirrus .....

Focus .... 509 .....

Spectr. Temp. 51.5°f ..... Dome Temp./Hum. 42°f/80% 216

Comparison Filter	Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
- 772		20/130	5"	6.7	A2V	RC	830/40.2°	BS	IIaJ-E	A	Vul Sch	Broken 2 pts oscillat. @ 220w	Exp slant dbl Fe str
									IIaD-E				
- 77-		30/137	4"	7.09	dK1*	RC	830/40.2°	BS	"	B	Asm Sp KK	T= 56°f Set 500 * mag. G9V	Fe sl str V sl str
10-		20/44	3-4"	3.78	F5V	"	"	"	"	A	"	T= 52°f Set 512	Fe str str
10-		30/	"	4.1	K3II	"	"	"	"	B	std/vel		Fe sl str S/ str
						"	"	"	IIaO	A		Set 512 T 515 cont vs/red	

217 Wed-Thurs Large June inst Tour

Date MAY 30-31/84 Observers ...T.n.....

Emulsion Batches: IIaO-E 06103 ~ 23034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48385	FO VIr HD 117362	13 24.7	+1 36	21 49	23 24	2 13 W	+	Fel-	7-7-7
~~48386~~				23 28		E		Fel-	10
48386T	Spot Calc for 48385-92 (next night)			15mn @15V		D4 3900	D3 4300	D2 4810	

Spectr. Temp. 50°F Dome Temp./Hum. ~~44°~~/90% Transparency Conditions ..Fine..by..2013.0.....

Focus .....5.12.....

Spectr. Temp. ..~~48.5~~°F..... Dome Temp./Hum. ~~40°~~/95%

218

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/145	3"	6.7	A2V	BC	830/40°	BS	IIaO-E	B	Var Sch		
30				"	"	"	"	A	stellar	Too cloudy	
							IIaO-E				

219 Thurs - Fri

Date MAY 31 - June 1 Observers K/G - T.H.

Emulsion Batches:
8m 680 IIaO-E 06103 - 23054
IIaJ-E - 28034

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48386	HD 209790	22h00.9	+64° 05'	1h 51m	2h 17m	3h 25° E	+64° 35'	Fe 1-	10-
48387	HD 197989	20 42.2	+33 36	2h 24m	2 35	1 46 E	33° 55'	"	13-13
48388	HD 196524	20 32.9	+14 15	2 40	2 50	1 25 E	14 35	"	13-13
48389	HD 206901	21 40.1	+25 11	2 57	3 07	2 13 E	+25 36	"	13-13
48390	HD 182640	19 20.5	+2 55	3 14	3 20	00 18 W	+3 06	"	13-13
48391	HD 8890A	1 22.6	+88 46	3 29	3 33	2 6 0 E	+89 11	"	13-13
48392	HD 186791	19 41.5	+10 22	3 40	3 51	0028 W	+10 37	"	13-13
48392F	Focus test					"	"	"	43-43

Spectr. Temp. 58° F Dome Temp./Hum. ~~56°~~ / ~~60%~~ Sundown +52° / 90% Transparency Conditions Fair, gusty wind, hazy

Focus 505

Spectr. Temp. ~~56°~~ F Dome Temp./Hum. ~~51°~~ F /

220

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	20/53	1-2"	46	A3 m	BC	1200/ 50.3	BS	IaJE	A	As in Sp		
	20/57	"	3.6	K0 III	"	"	"	"	B	"		
	20/54	"	4	F5 IV	"	"	"	"	A	"		
	20/52	"	4.4	F5 IV	"	"	"	"	B	"		
	20/50	"	3.58	F0 IV	"	"	"	"	A	"	prefer IIaJ	
	20/50	"	2	F	"	"	"	"	B	"		
	20/48	"	4.1	K3 II	"	"	"	"	A	~~Sp~~		
					"	"	"	IIaJE	B		Sp too faint (S/N fog) yes, but 8m dev.	visible

221

Date June 1-2/84 Tr Sal Observers T.A.

Emulsion Batches: IIaO-E 06103 - 01064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48393	HD 122742	13 58.6	+11 16	20 59	23 19	1 41 W	+	Fe/—	10-10
48393T	Spot	Coords for	48393	-96		15 min @ 15V	D4 3900	D3 4300	D2 48:0
48394	HD 140538	15 39.1	+2 50	23 26	01 09	1 51 W	+2 36	Fe/—	10-10
48395	HD 137909	15 23.7	+29 27	01 14	01 22	2 20W	+	"	13-13
48396	HD 157482	17 18.5	+40 04	01 25	02 18	1 23W	+4003	"	9-9-9

Spectr. Temp. ..65°F..... Dome Temp./Hum. +59°F/57% Transparency Conditions ...Fine...v.s/haze.....

Focus ....5.04.....

Spectr. Temp. .....57..... Dome Temp./Hum. +57°F/57% RH 17 248 +10 1550-62 222

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/172	2"-6"	68	G8E	BC	1200/503	BS	IIIaO-E	B	Asm Sp	broken 2pcs v	s/wk
							IIaO-E				
40/92	3"-5"	6.55	dG5	BC	1200/503	BS	IIIaO-E	A	Asm Sp	T-62°F	fine
20/40	3"	3.93	F0p	"	"	"	"	B	"	+60°F	fine
40/95	3"	V= 5.60	dF8	"	"	"	"	A	Bl-Proj		fine

223 Coude 12" cam Parker Spectrograph

Date June 3-4/84 Observers KK-TP-KLG

Emulsion Batches: IIaJ-E 31083 - 16054

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48397A	focus								
B	HD120136	13 42.5	+17 57	21 15	21 22				
C	"	"	"	21 24 (500)	21 2554				
48398A	η Boo II 2	1982 13 53.9	+18 29	22 25	00 51	3 31 W	+18 15		
B	η Boo	"	"	00 58	00 59	339 W	+18 29		
C	"	" 1900	" 1900	00 59	00 59	339 W	"		
48399	HD 137909	15 23.7	+29 27	1 18	01 43	2 50 W	+29 43	Fe/-	22-22
48400	HD 159561	17 30.3	+12 38	1 47	1 57	0 59 W	+12 34	"	22-22
48401	HD 182640	19 20.5	+2 55	2 02	2 15	0 37 E	+3 06	"	22-22
48402	HD 196524	20 32.9	+14 15	2 23	2 45	1 18 E	+14 32	"	22-22
48402T	Spot Cals for	48399-48403			15m	0 04	17.5V 3900	15V 1.22	15V 48.0
48403	HD 8890A	01 22.6	+86 46	2 48	3 23	0 00 E	+89 13	Fe/-	22-22
48403F	-					0 0		Fe/-	22-22

Spectr. Temp. 62°f Dome Temp./Hum. 61°/57% Transparency Conditions Very Fine

Focus 505

Spectr. Temp. 60.5°f Dome Temp./Hum. +57°/60%

224

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst. + Tertiary	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				Parkes Spect	4.0	50μ	IIaO				
1:79		4.99	F7 V	"	"	"	"		Asm Sp - Kk	= B00 = HR 5185	sl stray
79 sec exp				"	"	"	"		"	1 tra / F = 5+4 used	v sl weak
5B				"	"	"	IIaO-E		"	5+6 prob better	exp good
1 [illegible]				"	"	"			"		exp good
6 min exp				"					"		weak
20/110	2"	3.93	F0p	BC	1200/5083	BS	IIIa J-E	A	Asm Sp	J-62°F	fine
20/100	2"	2.12	A5 III	"	"	"	"	B	"		fine
20/100	1-3"	3.68	F0p	"	"	"	"	A	"		fine
20/111	2"	3.78	F5 IV	"	"	"	"	B	"		fine
							"				
20/114	3"	2	F	BC	1200/5083	BS	"	A	Asm Sp	cloud	fine
				"	"	"	IIaO E	B	Sat 505		ok
				Kk	we need more		IIIa J - exposures				very weak (too wk to measure)
				Old Tinsley	consist of A strips				2 4×5s Hough		

225

Mon-Tues

Date June 4-5/84 Observers Tn-Kly

Emulsion Batches:
II-O-E 06103 - 03064
*II-O-E 06103 - 03054 20%

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48404F	Focus test					0 0	+3 20	Fe/-	30-3
48404	HD99028	11 18.7	+11 05	20 36	20 52	2 05 W	+10 40	n	14-14
48405	HD 112956	12 55.2	+69 19	21 08	0034	4 17 W	+68 49	"	7-7
48404T	Spot Cal for	48404.			15 min @ 15V	D4 3900	D3 4300	D2 4810	
48405T	Spot Cal for	48405, 06.			15 min @ 15V	D4 3900	D3 4300	D2 4810	
48406	HD158633	17 25.3	+67 24	0041	130	0041 W	+	Fe/-	7-7

Spectr. Temp. 72.5°F ..... Dome Temp./Hum. 68°F / 57% ..... Transparency Conditions Fine till 23hrs .....

Focus ..... 502 .....

Spectr. Temp. 68°F ..... Dome Temp./Hum. 63°F / 70% .....

226

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/503	RS	IIaO	A		View finder W E S Field Sound still set 502 Ref	OF bu two wk Fe v wk Fine v wk Fe Fine
30/46	1-2"	4.03	F2IV	"	"	"	IIaO-E	F	Hsm Sp		
20	p11+?	1"	≈9	dG6	"	830/102	"	*IIaO-E	B	"	
							IIaO-E				
							*IIaO-E				
30/73	1"	7.09	dK1	BC	830/407	BS	*IIaO-E	A	Hsm Sp	T=69°F Uniwedged cloud Sound up	Fo wk sl wk
							Cloud				
	broken 1" missing & reload.										

227 Tues-Wed

Date June 5-6/84 Observers Tn

Emulsion Batches: 8568 (84 later!) IIa-E 06103 - 05064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
48407	HD 117362	13 24.7	+1 36	20 40	2240	1 51 W	+	Fe/—	77-
48407T	Spot Colo for 48407			15 min @	15V	D4 3900	D3 1300	D3 4810	

Spectr. Temp. 73°F ..... Dome Temp./Hum. 65°/80% ..... Transparency Conditions ... hazy ? cloudy .....

Focus ..... 505 .....

Spectr. Temp. ..... Dome Temp./Hum. 60°F/90% 228

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/40	4"/6"	6.7	A3V	BC	830/402	BS	IIaO-E	A	Var, Sch	cloudy (½ Exp (or Less)	wk
							IIaO-E				/
											Wk Feat

229 Thurs-Fri

Date June 14-15/84 Observers Tm Fla (on twin photometer) 8" 68°

Emulsion Batches: IIaO-E 06103 - 05064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48408	HD 165174	17 59.6	+1 55	20 47	21 50	2 57 E		Fel-	7-7
48409	"	"	"	21 52	22 51	1 56 E		"	7-7
48410	"	"	"	23 03	0004	0 43 E	"	"	7-7
48410T	Spot Calib for 48406-				15 min @ 15V	D4 3900	D3 4300	D2 4810	
48411	HD 165174	17 59.6	+1 55	00 06	0056	0 09W		Fel-	7-7
48412	HD 161096	17 38.5	+4 37	01 08	01 22	0 57W	+4 38	"	10-10
48412F	Focus test					"	"	Fel-	20-

Spectr. Temp. 67°F Dome Temp./Hum. 60°F / 86% Transparency Conditions ... Fine

Focus ... 507-509

Spectr. Temp. 58°F Dome Temp./Hum. +50°F / 93%

230

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/42	4-7"	6.15	B05 III n	BC	830/40.2	BS	IaO-E	A	Fln prog	slow at 1st	Fine
40/56	4-5"	"	"	"	"	"	"	B	"		Fine
40/60	"	"	"	"	"	"	"	A	"	T=62°F set 509	Fine
							"				
40/45	3-6"	6.15	B05 III n	BC	830/40.2	BS	"	B	Fln prog	some cloud → dispersed	Fine
40/60	4"	3.9	K2 III	"	"	"	"	A	std Vel		Sl Str
				"	"	"	"	A		T=+58°F set 509	Focus VWK at two of the nature of scans
							All have very weak comp arcs				

231

Date Fri Sat Jun 15/16/84 Observers Ky. Tn.

Emulsion Batches:
IIIaJ-E 31083 - 14064
IIaO-E 06103 - 05064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48413	HD 121370	13 49.9	+18 54	20h 51m	21 07	0033W	+18° 31'	Fe/-	24-24
48414	HD 137909	15 23.7	+29 27	21h 1m	21 31	0035	+29 11	"	24-24
48414T	Spot Calib for 48413-14,17				15 min @ D4	17.5V 3400	15V 4300	15V 4810	
48415	HD 137107	15 22.5	+30 21	21 36	22 18	0016W	+30 22	"	7-7
48416	HD 140538	15 39.1	+2 50	22 21	00 00	137W	+2 35	"	7-7-7
48416T	Spot Calib for 48415	-16,18		15 min @ 15V		D4 3400	P3 4300	D2 4810	
48417	HD159561	17 30.3	+12 38	0004	00 09	0004E	+1235	Fe/-	22-2
48418	HD158633	17 25.3	+67 24	00 14	02 03	159W	+6721	"	10-10
48419	HD 209790	22 009	+64 08	02 06	3 00	135E	+6933	"	10-10
48419F	Focus test?		Maybe no dBl	stellar exp in comp region		n	n	n	40

Spectr. Temp. 64°F Dome Temp./Hum. +60°/70% Transparency Conditions . Remained .....

Focus 504

Spectr. Temp. 57°F Dome Temp./Hum. +52°/85%

232

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/100	3"	2.8	GO	BC	1200/5033	BS	IIaJ-E	A	Asm Sp Kit	Cold (broken 1 pc sun)	
20/100	"	3.9	FOp	"	"	"	"	B	"		fine
							"				
20/56	3"	6.2	G2V	BC	1200/5033	BS	IIaO-E	A	Asm Sp		fine
20/50	3-2"	6.6	dG5	"	"	"	"	B	"	T = 60°F	fine
							"				
20/104	3"	2.2	A5III	BC	1200/5033	BS	IIaJ-E	A	Asm Sp	Set 505 T=60°F	v.d strong
40/80	1-2"	7.1	dK1	"	"	"	IIaO-E	B	"		fine
40/99	"	4.63	A3m	"	"	"	"	A	"	cloud	fine
				"	"	"	IIaJ-E*	B	57°F	*Also fog to S of front of patch	V.S/blue

233

Date Mon. Tue. Jun. 15. 1915 Observers ...M.L.y. ... T.e. .....

5" 68° Emulsion Batches:
8" 68° Mal-c 31083 - 14064
Mal-c 06103 - 05064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48120	HD 12370	1h44m	+18°54'	22h04m	22 15	1 54W	+18°27'	Fc/-	22-22
48121	HD 137909	15 25.7	+29°27'	23h15m	23 48	0044W	+29°10	"	22-
48122	HD 144287	16 00.0	+25 30	23 42	00 53	2 23W	+25 19	"	10-10
48123	HD 159561	17 30 3	+12 38	00 57	1 01	1 00W	+12 36	"	22-
48124	HD 195987	20 29.4	+41 32	1 10	2 50	0 10E	+41 53	"	6-6
~~48125~~	~~HD 206901~~	~~21 40.1~~	~~+25 H~~	~~2. 57~~	~~3 25~~	~~0 45E~~	~~+25 36~~	~~"~~	~~22-~~
48125	HD 209790	22 00.9	+64 32	331	3 40	0 51E	+64 34	"	9-9

Spectr. Temp. 73°..... Dome Temp./Hum. 68°/96% Transparency Conditions ..Fine....Somewhat.....

Focus .....5.02 - 5.06 (G2)

Spectr. Temp. 68°F..... Dome Temp./Hum. 63°F/92%

234

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/105	1"	2.3	GO	BC	1200/ 5003	BS	IIIa-E	A	AsmSpKK		
20/101	"	3.9	FOp	"	"	"	"	B	"		
20*/1+	1-2"	7.6	G8IV	"	"	"	IIaO-E	A	"	* Exposure not working (Mm)	sl weak
20/10?	1"	2.2	A5m	"	"	"	IIIaJ-E	B	"	T=71°	fine
60/120	1"	7.8?	G9V	"	8?0/ 4003	"	IIaO-E	A	"	* Image Eye Piece is further Shattered All lost Setup 1-57	good
~~+100~~	~~1-2"~~	~~4.4~~	~~F5IV~~	"	1200/ 5003	"	IIIaJ-E	B	"		
0/30	1-2"	4.6	A3m	BC	1200/503	BS	IIIaO-E	A	"		
						Spot Calib of previous night use for					
						½ exposure Emulsion not hypered					
						IIIaJ's have higher than normal fog					
						— Too dry in forming gas? or not enough vacuum					
						due to pump failure?					

235

Date June 19-20 Tues/Wed Observers Tn Sons Mt. A. Gios

Emulsion Batches:
IaO-E 06103 - 16064
IIaJ-E 31083 - 14064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48426F	Focus test					0 0	+1° 11	Fe/-	26-26
48426	HD 117362	13 21.7	+1 36	20 44	22 00	2 07W	+1° 11	Fe/-	6-6
48426T	Spot Calib for	48426, 29, 32.		15min@15V		D4 3900	D3 4300	D2 4810	
48427	Mizar HD 116657	13 19.9	+55 27	22 09	22 44	2 57W	+55 00	Fe/-	24-24
48428	HD 120315	13 43.6	+49 49	22 47	22 51	2 42W	+	"	24-24
48429	HD 157482	17 18.5	+40.04	22 57	00 43	0 57W	+39 59	"	9-9-9
48430	HD 164852	17 58.1	+20 50	00 49	01 40	1 15W	+20 49	"	13-13-13
48430T	Spot Calib for	48427-28, 30, 31		15min@D4		17.5V 3900	15V 4300	15V 4810	
48431	HD 196867	20 35.0	+15 34	01 49	02 11	0 5E	+15 50	Fe/-	22-22
48432	HD 186791	19 41.5	+10 22	02 16	02 29	0 20W	+10 34	"	9-9

Spectr. Temp. 73°F Dome Temp./Hum. +65F / 65% Transparency Conditions Fine - sl. hazy

Focus 505

Spectr. Temp. 63°F Dome Temp./Hum. +58F / 93%

236

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
L-2						BC	830/40.2°	BS	IIaO	A			OK
		40/60	3"	6.7	A2V	"	"	"	IIaO-E	A	Sel Var	* Comp. Filter problems	fine
									IIaO-E				
		20/115	2-3"	V= 3.96	Am	EC	1200/50.3	BS	IIIaJ-E	B	Am Sp KK	T=71°F Set 502	Strong arc Fine
		20/100	"	1.66	B3V	"	"	"	IIIaJ-E	A	MK std		Strong arc sl str comp sl/str Fine
		40/150	3"	6.2	dF8+G	"	"	"	IIaO-E	A	SB SL		
		20/100	2-3"	5.19	B3V	"	830/40.2°	"	IIIaJ-E	B	SB Blu	T=66° Set 502 * Comp filter problems	fine
									IIIaJ-E				
L-2		20/120	2-3"	3.71	B9V	BC	1200/50.3	BS	IIIaJ-E	A	MK std		Strong arc Fine
		20/40	"	4.1	K3II	"	"	"	IIaO-E	B	std vel		s/str

237

Date Jun 20, 21, Wed, Thurs. Observers ...Tn.:.Kly.....

Emulsion Batches:
II-aO-E 06103 - 16064
..... .20 1.87
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48433F	Focus test					0 0	+29 11	Fe/-	28-28
48433	HD 122742	13 58.6	+11 16	20 47	22 22	1 59 W	+10 57	Fe/-	9-9-9
48434	HD 137909	15 23.7	+29 27	22 24	22 30	0 43 W	+29 11	"	13-13
48435	HD 157182	17 18.5	+40 04	22 35	23 53	0 12 W	+40 00	"	9-9-9
48435	T Spot Cal.	for 48433-37			15 min.	@15V	3 D4 900	D3 4300	D2 1200
48436	HD 158633	17 25.3	+67 24	23 56	01 41	1 55 W	+67 19	Fe/-	9-9-9
48437	HD 195987	20 29.4	+41 32	1 46	3 54	1 01 W	+41 51	"	9-9

Spectr. Temp. 70°F Dome Temp./Hum. 63°F/59% Transparency Conditions v. cl. hazy

Focus 502

Spectr. Temp. 61°F Dome Temp./Hum. 53°/90%

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/ 503	BS	IIaO	B		center 60 blocks	v.g. rich
20/202	2"	6.8	G8V	"	"	"	IIaO-E	B	Asm Sp		v.g. fine
20/34	"	3.93	F0p	"	"	"	"	A	"		fine
40/160	2"	6.2	dF8 +G	"	"	"	"	B	Sp Ha-Ky	Se-503 T-63°	fine
							"				
80/200	2"	7.1	dK1	EC	1200/503°	BS	"	A	Asm Sp K4	comp	exp fine for cont
80/150	2"	7.82	G9V	"	"	"	"	B	"	T=62° Se 505	good
								3×7 should be	enough for comparison		

239

Date June 21-22 1984 Thurs-Fri. Observers LS-TH

Emulsion Batches:
IIaO-E 06103 – 16064 1.18 1.98
*IIaD-E 06103 – 21064 1.20 1.87

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48438F	Focus test					0 0	+19	Fe – 2	50-5
~~48438~~	~~HD124897~~			~~20 38~~	~~20 39~~	~~00 0gW~~	~~+19 16~~	~~Fe/–~~	~~12 13~~
48438	HD120315	13 43.6	+49 49	20 44	20 45	00 42W	+49 23	Fe/–	13-13
48439	HD124897	14 11.1	+19 42	20 49	20 50	00 19W	+19 16	"	13-13
48440	HD157482	17 18.5	+40 04	20 56	22 37	01 00E	+40 00	"	9-9-5
48441	HD174403	18 45.2	-20 25	22 43	01 21	00 16W	-20 20	"	6-2-4
48441T	Spot Calib	for	48438	-41.		15min @ 15V	D4 3300	D3 4300	D2 4210
48442	HD157482	17 18.5	+40 04	01 28	03 00	03 25W	+40 00	Fe/–	9-9-
48443	HD186791	19 41.5	+10 22	03 06	03 20	01 19W	+10 34	"	13-13
48444	HD196867	20 35.0	+15 34	03 22	03 28	00 34W	+15 53	"	13-
48444T	Spot Calib	for	48442	-44		15min @ 15V	D4 3900	D3 4300	D2 4810

Spectr. Temp. ...72°F..... Dome Temp./Hum. 66°F/56% Transparency Conditions .getting hazy - cloudy...

Focus .....502.....

Spectr. Temp. ....65°F..... Dome Temp./Hum. 60°/57%

240

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50°	BS	IIIa-E	B		1" moon	OK
20/28	2"		K2III p	"	"	"	II-O-E	B	Std Vel	shattered - cancelled	
20/28	2"	1.7	B3V	BC	1200/50°	BS	II-O-E	A	MK Std		fine
20/26	1"	1.2	K2III	"	"	"	"	B	Std Vel		s/str
40/170	1"	6.2	F8+G	"	"	"	"	A	SB Blu/Ly		Fine
100/275	2.3"	7.5	B6IV	"	830/40.2	"	"	B	EB Ly/Tur	broken 2pcs T=70°F Set 506.	wk
							"				
40/125	1-2"	6.2	F8+G	BC	1200/50.2	BS	II-O-E*	A	SB Blu/Ly	cloud T=67°F Set 503	f.e
20/30	"	4.1	K3II	"	"	"	"	B	Std Vel		Fine
20/35	"	3.71	B9V	"	"	"	"	A	MK Std		Fine

1984

Date June 22/23 Fri Sat ..... Observers Ly-Tn .....

Emulsion Batches: 19 1.84
IIaD-E ... 06103 — 21064
IIaJ-E ... 31083 — 22064
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48445F	focus					00 17W	+19 16	Fe/-	50-50
48445	HD124897	14 11.1	+19 42	20:49	20 58	00 30W	"	"	25-25
48446	HD157482	17 18.5	+40 04	21:03	22 17	01 16E	+39 59	"	7-7
48447	HD164852	17 58.1	+20 51	22:22	23 15	00 57E	+20 50	"	12-12
48447T	Spot Calc	for 48446,48,49		15min@15V		D4 3900	D3 4300	D2 4800	
48448	HD162714	17 47.3	-06 07	23:20	02 36	02 33W	-06 09	Fe/-	7-7
48448T	Spot Calc	for	48445,47.		15min D4	17.5V 3900	15V 4300	15V 4800	
48449	HD181391	19 15.2	-05 36	02:49	03 48	2 16W	-5 26	Fe/-	7-7

Spectr. Temp. 70° F ..... Dome Temp./Hum. 64°F / 59 % Transparency Conditions .... cirrus .. diff. 9.0m .....

Focus ..... 502 .....

Spectr. Temp. ..... Dome Temp./Hum. 157 / 67 %

242

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/5003	BS	old IIIaJ	H		center vs/blue	
20/122	1"	1.2	K2III p	"	"	"	IIaJ E	A	std vel.		strong
40/157	1"	6.2	dF8 +G	"	"	"	IIaO-E	B	SB B/n/Ly		Fine
20/107	1"	5.2	B3V	"	"	"	IIIaJ E	A	SB Bln		Fine
							IIaO-E				
00/190	1-2"	7.4	G0p	BC	1200/5003	BS	IIaO-E	B	Ceph - Ly	some cloud (ended at 68°F)	sl wk
							IIIaJ-E				
40/110	2"	6.0	G8III	BC	1200/5003	BS	IIaO E	A	SB - Ly	T=64°F Set SD4	Poor wk Fine

243

Sun-Mon

Date June 24-25/84 Observers K.K.-T.G

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
A8449F	Focus	1+20	5+0	5+5	5+10	(5+5	180 sec)	Ne	30
	HD124897			21 22	20s				
	HD124897			21 24	10s				

Spectr. Temp. ..... Dome Temp./Hum. +65°F/62% Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ...../.....

244

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						Tertiary Pocket Spect	4:—	50	IIaO				
				1" filter								2 may fillin focus 5+5	
												No filter CLOUDS	

245

Date June 25-26, 1984 (Mon-Tues) Observers K.K.-T.M.

Emulsion Batches:

15m MS 69°F IIaO e 0484 – 24.06A

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr
18450 A	NGC 5433?	14 h 1	+19 45	20 55	20 56		+19 17	Ne	30s	5.0
B	"	1981	1981	20 56	20 57	0 41W				
C	28 Boo	14 33.9	+29 50	21 05	21 10	0 37W	+29 48			
D	BD +89°	00 10.3	+89 30	21 50	22 30	RA lost 0 41E	+89 18			
E	27 Ser	15 45.5	+7 25	23 40	23 52	2 05W	+7 24	Ne	30s	

Spectr. Temp. ..... Dome Temp./Hum. 59°F / 60% Transparency Conditions . Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 52F / 92%

246

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
set +.25 5+0, 5+2.5, 5+5			K	Pat+Spect	4.–	65*	IIaO (1 pass)			* 40 with sharp mirror	good
							" (2 passes)				strong
400 cts		4.84	F2V						standard		blank!
		9.6	F-G						Polaris Photometry	Polaris C1 (wrong star??)	only light sky!
700 cts		5.03	G0V						DK 54		strong

5 + 01 best focus 5 + 2.5 actually used

use 1000 counts = 9m exposure

so, roughly 5 mag 4m

8 mag 75m

247 Tour looked at Mars & Saturn
Tues Wed

Date June 26-27.184... Observers Bla.-Ty.....

Emulsion Batches:
Mar-E 31083 - 22064
Pan-E 06103 - 21064
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48451	HD 164852	17 58.1	+20 51	21 28	22 32	1 30E	+20 53	Fe/-	12-12-12
48451T	Spot Calk for	48451,5	3,55	15min @	04	1750 3900	150 4300	150 4810	
48452	HD 157482	17 18.5	+40 04	22 40	00 06	00 49W	+40 00	Fe/-	7-7-7
48453	HD 137909	15 23.7	+29 27	00 10	00 43	0320W	+2910	Fe/-	18-18
48454	HD 209790	22 00.9	+64 08	00 49	01 01	0259E	+6436	"	11-11
48455	HD 164852	17 58.1	+20 51	01 07	01 57	0158W	+20 51	"	12-12-12
48456	HD 157482	17 18.5	+40 04	01 59	02 37	0320W	+40 00	Fe/-	7-7-7

Spectr. Temp. ...+68°F..... Dome Temp./Hum. +63?/82?% Transparency Conditions ..getting cloudy.....

Focus .....503-504...

Spectr. Temp. ...63°..... Dome Temp./Hum. +..../99?%

248

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	0/240	1"-2"	5.19	B3 IV	BC	1200/503°	BS	IIIaJ-E	A	SB Blk	* Uncertain Hrs	Comp s/wk Fine
								IIaJ-E				
	0/150	1"-3"	6.2	dF8 +G	BC	1200/503	ES	IIaO-E	A	SB Blk	no spot Cal available	w/Comp fine/v
	20/115	"	3.93	F0p	"	"	"	IIIaJ-E	B	Hamp SP kk		v wk comp Fine
	20139	1-2"	4.63	A3m	"	"	"	IIaO-E	A	"	no spot Calib	st comp fine
	20/110	"	5.19	B3 IV	"	"	"	IIIaJ-E	B	SB Blk	T=63°F Set 504	Comp wk v s/wk
	20/41	2-3	6.2	dF8 +G	"	"	"	IIaO-E	A	SB Blk	no spot Calib Cloud.	fe wk st

249

Sun - Mon

Date July 8-9 1984 Observers Kly. - Ri.

8m 68° Emulsion Batches:

5m 68° IIaO-E 96103-27064

IIaJ 31085-22064

323.+

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48457	HD 122742	13h 58m.6	+11° 16'	20:50	22:02	2 50W @ D4	+10° 50' 15 @ D3	Fe/- @ D2	7-7
48457T	SPOT CALIB FOR PLATES	48457			15 MIN @ 15U	3900	4300	4810	
48458	HD 137909	15 23.7	+29 27	22 07	22 15	1 40W	+29 10	Fe/-	12-12
48459	HD 140538	15 39.1	+2 50	22 20	23 07	2 17W @ 17.5U	+2 33 @ 15U	" @ 15U	7-7
48459T	SPOT CALIB FOR PLATES	48458-			15 MIN @ D4	3900	4300	4810	
48460	HD 159561	17 30.3	+12 38	23 12	23 19	0 40W	+12 35	Fe/-	24-2
48461	HD 196524	20 32.9	+14 15	23 25	23 38	2 07E	+14 32	Fe/-	12-12
48462	HD 152640	19 20.5	+2 55	23 42	23 51	00 38E	+3 03	"	12-12
49463	HD 195987	20 29.4	+41 32	23 58	01:25	00 16E	+41 51	"	12-12
48463F	Focus Test							"	28-2

Spectr. Temp. 6.8° Dome Temp./Hum. 65°/76% Transparency Conditions ...-S/hazy-cirrus -clear→ clouds

Focus 503

Spectr. Temp. 6.7 Dome Temp./Hum. 63°/78% 250

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
80/200	1"	6 8	G8 II	BC	1200/ 50°C	BS	IIaO-e	A	KK-AsmSp		
							IIaO-E				
0/00	1"	3.93	FOp	BC	1200/ 50.5	BS	IIIaj-E	B	KK AsmSp		fair
+0/100	1"	6.6	GO5	"	"	BS	IIaO-E	A	"		"
							IIIaJ-EF				
10/32	1"	2.2	AsIII	BC	1200/ 50.5	BS	"	B	KK Asm-Sp	short exp	good
10/00	1"	3 8	FOIV	"	"	"	"	A	"	~~sprom~~	fair
10/50	1"	3.7	FOIV	BC	"	"	"	B	"		Fe sl str fine
200/123	1"	78	GoIV	"	"	"	IIbO-E	A	"	sudden thick clad	cloudy
					"	"	IIaO-E	B		T= 67° F	
										dust on slicer?	

25D 1984

Date Mon. Tues. July 9-10 Observers K.L. R.I. 8" 68°

Emulsion Batches:
Mar ef 31083-22064
Tech E 06103-27064

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48464	HD 8890A	1h 22.6m	+88 46	20 43	20 52	10 34E	+89 10	Fe/-	25-25
48465	HD 112956	12 55.2	+69 19	21 10	22:41	04h 39w	+68 50	"	6-6-6
48465T	SPOT CAGN' FOR PLATES 48465				15 MIN @ 15 VOLTS		① DL ② PS 3900 4800	3) D2 4810	
48465F	FOCUS SHOT							T/-	25-25

Spectr.
Focus
Spectr.
Exp Mtr
10/6

Spectr. Temp. ..72..... Dome Temp./Hum. 66°5/..60% Transparency Conditions . hazy-shows clouds
Focus .....502..... Damn it!!
Spectr. Temp. ..69..... Dome Temp./Hum. 62°/..92%

252

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/5 C	2"	2	F	BC	1200/ 50.5	BS	IIIaj-E	A	KKAsmSp	$\alpha = 2^h 23^m.8$	fine
400/122	1"-2"	9	dG6	"	830/ 46.2	"	IIaO-E	B	"	reversed F=505	weak
							IIaO-E				
				BC	830/40.2	BS	TiO-E	A		T=69° F=505	

253

8" 68°

Emulsion Batches: IIaD-E 06103-09074

Date WED THURS July 11-12 Observers Ri - KK - Fla

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48466	Jupiter III	1984. 18 28.4	−23 15	23:23	00:16	00h 50w	−23 15	Fe/-	7-7-7
48467	HD 165174	17 59.6	+1° 55'	00:22	00:52	01h 52w	+01°58	Fe/-	7-7-7
48467T	SPOT CALN' FOR PLATES 48466-71				15 MIN @ 15 VOLTS	① D4 3900	② D3 4500	③ D2 4810	
48468	HD 165174	17 59.6	+01° 55'	00:54	01:26	02h 25w	+01°58	Fe/-	7-7
48469	HD 165174	17 59.6	+01° 55'	01:29	02:15	03h 15w	+01°58	Fe/-	7-7-7
48470	HD 212943	22 22.8	+04 12	02:23	03:10	0h 13m E	+04° 39'	Fe/-	7-7-7
48471	HD 217782	22 58.0	+42° 13'	03:18	03:37	0h 21m E	+42° 44'	Fe/-	7-7-7
48471F	FOCUS TEST					0h 21m E	+42° 44'	Fe/-	25-25

Spectr. Temp. ...70°F..... Dome Temp./Hum. ..64°F...94%... Transparency Conditions ..Good.....

Focus .....505.....

Spectr. Temp. ...67°F..... Dome Temp./Hum. ..63°F.....89%...

254

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		80/150	4"	7	G2 V	B.C.	830/40.2	B.S.	IIaO-E	A	STD UEL		good
		40/70	3-4	6.15	B0 III a	B.C	830/40.2	B.S.	IIaO-E	B	Fln Prog		fine
									IIaO-E				
		40/70		6.15	B0.5 III a	B.C.	830/40.2	B.S.	IIaO-E	A	Fln-Prog.		fine
		40/60	3-4	6.15	B0.5 III a	B.C.	830/40.2	B.S.	IIaO-E	B	"	T=69°F F=506	fine
		40/75	>5	5.9	K0 III - IV	B.C.	830/40.2	B.S.	IIaO-E	A	STD UEL		fine
		40/71		5.17	A2	"	" / "	"	"	B	KK-Asm Sp	T=67°F, F=507	fine
						B.C.	830/40.2	B.S.	IIaO	A		T=67°F F=507	ok
												Comparison slightly strong	

255

THUR - FRI

Date July 12-13 1984. Observers R. - Fla. IN 24 IN. DOME

8m 68°

Emulsion Batches:

IIaO-E 06103-09074

IIaO-E 06103-12074

IIIaF ef 31083-12074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48472F	FOCUS TEST							Fe/-	27-2
48472	HD 165174	17 59.6	+01° 55	20:43	21:13	01h45E	+01° 58'	Fe/-	7-7-
48473	HD 165174	17 59.6	+01° 55	21:15	21:40	01h17E	+01° 58'	Fe/-	7-7-
48473T	SPOT CALN' FOR PLATES 48472 - 48478				15MIN@15VOLTS		① D4 3900	② D3 4300	③ D2 4810
48474	HD 165174	17 59.6	+01° 55	21:42	22:08	00h50E	+01° 58	Fe/-	7-7-
48475	"	"	"	22:09	22:39	00h15E	"	"	7-7-
48476	"	"	"	22:41	23:12	00h15W		"	7-7-
48477	"	"	"	23:15	23:46	00h50W	"	"	7-7-
48478	HD 182572	19 20.2	+11°44	23:52	00:32	00h15W	+12° 00	"	7-7-
48478F	FOCUS TEST							Fe/-	27-2
48479	HD 164852	17 59.1	+20° 50	00:48	01:49	02h55W	+20°53	Fe/-	12-12-
48479T	SPOT CALN' FOR PLATES 48479 - 48483				15MIN@D4		① 17.5V 3900	② 15V 4300	③ 15V 4810
48480	HD 159561	17 30.3	+12°38	01:54	02:14	3h47mW	+12°36	Fe/-	12-12-
48481	HD 182640	19 20.5	+02°55	02:19	02:48	2h31mW	+03°09	Fe/-	12-12-
48482	HD 196524	20 32.9	+14° 15'	02:53	03:14	01h45W	+14°33	Fe/-	12-12-

Spectr. Temp. ...74°F..... Dome Temp./Hum. ...70°F...70%... Transparency Conditions ..CIRRUS AFTER 01:00...

Focus .....504.....

Spectr. Temp. ..... Dome Temp./Hum. .....

central wavelength on G12 is slightly to the red 256

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/40.2	B.S.	IIaO	A		BROKEN 2 PIECES	
40/70	3-4	6.15	130.5 III$_a$	B.C	830/40.2	B.S.	IIaO-E	B	Fl$_a$ Prog.	BROKEN 2 PIECES	good
40/70	"	6.15	130.5 III$_a$	B.C.	830/40.2	B.S.	IIaO-E	A	"	BROKEN 1/8" MISSING	good
							IIaO-E				
40/70	"	6.15	130.5 III$_a$	B.C	830/40.2	B.S.	IIaO-E	B	Fl$_a$ - Prog.	BROKEN 1/2" MISSING	good
40/70	"	"	"	"	"	"	"	A	"		good
40/70		"	"	"	"	"	"	B	"		good
40/70		"	"	"	"	"	"	A	"	T=73°F F=505	
20/35	4-5	5.2	G8 IV	"	"	"	IIaO-E^{4}	B	STD VEL	fe Str Str	
				"	"	"	IIaO	A		T=71°F F=505	
40/240		5.19	B3 IV	B.C.	1200/50.7	B.S.	IIIa-F f	A	SB - Bl$_a$	T=71°F F=502	good
							IIIa-F f				
10/50	4	2.2	A5 III	B.C	1200/50.7	B.S	IIIa-F f	B	Asm Sp/KK		good
20/100		3.68	F0 IV	B.C.	1200/50.7	B.S.	IIIa-F f	A	"	T=68°F ; F=502½	good
20/100		3.8	F5 IV	"	"/"	"	"	B	"		good

#2

257

Date Fri. July 13/84 Observers R.-F.L.

Emulsion Batches:
Plate 31083-12074
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48483	HD 222368	23h 34m.8	+5° 05'	03:19	03:50	0h 41m E	+5° 34'	Fe/—	12-12-1
48483F	Focus 9 EST					0h 41m E	+5° 34'	Fe/—	30-30

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ~~some~~ cirrus cloud around .....

Focus .....

Spectr. Temp. 67°F ..... Dome Temp./Hum. 64°F 83% 258

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/240		4.6	F7 V	BC	1200/50.7	BS	IIIaJ ef	A	STDVEL		good
"		"		"	"	"	IIaO	B		$\bar{q}$=67°F; F=502.5	

259

FRI SAT

Date July 13-14 84 Observers R. - FLN. H. BIN. DOME

Emulsion Batches:
Ilford E 06103-12074
Ilford F 31083-12074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48484F	FOCUS 9 PST							Fe/-	30-30
48484	HD 165174	17 59.6	+01° 55'	20:40	21:08	01h45E	+02°00	Fe/-	7-7
48485	"	"	"	21.11	21:38	01h15E	"	Fe/-	7-7
48485T	SPOT CALIB FOR PLATES 48484				15 MIN @ 15 VOLTS		① D4 3900 ② D3 4300 ③ D2 4810		
48486	HD 165174	17 59.6	+01° 55	21.40	22:06	00h46E	+02°00	Fe/-	7-7
48487	"	"	"	22:08	22:32	00h21E	"	"	7-7
48488	"	"	"	22.33	22:55	00h03W	"	"	7-7
48489	"	"	"	22:58	23:27	00h35W	"	"	7-7
48490	HD 171391	18 29.5	-11° 03	23:33	00:11	00h48W	-10°56	Fe/-	7-7
48490F	FOCUS 9 PST							Fe/-	30-30
48491	HD 138749	15 28 9	+31°42	00:25	00:44	4h24mW	+31°32	Fe/-	12-12
48492	HD 164852	17h 58.1m	+20° 50'	00:49	01:23	2h34mW	+20° 52'	Fe/-	12-12
48492T	SPOT CALIB FOR PLATES 48491 - 48492				15 MIN @ D4		① 17.5V 3900 ② 15V 4300 ③ 13V 4810		
48493	HD 157482	17h [illegible]	+46° 04'	01:23	02:38	04h29W	+46° 04'	Fe/-	7-7
48494	HD 181391	19 15.2	-05 36	02.45	03:33	03h25W	-05°24	Fe/-	7-7

Spectr. Temp. ...79°F..... Dome Temp./Hum. ..75°F....68% Transparency Conditions ..Good WITH SOME THIN CIRRUS CLOUDS AROUND

Focus .....503.....

Spectr. Temp. ..... Dome Temp./Hum. .....

260

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				B.C.	830/40.2	B.S.	IIaO	A			
40/80	2-3	6.15	B0.5 III n	B.C.	830/40.2	B.S.	IIaO-E	B	F/n Prog		
40/80		"	"	"	"	"	"	A	"	T=78°F	
							IIaO-E				
40/80		6.15	B0.5 III n	B.C.	830/40.2	B.S.	IIaO-E	B	F/n Prog		
40/80		"	"	"	"	"	"	A	"	T=78°F	
40/80		"	"	"	"	"	"	B	"		
40/80		"	"	"	"	"	"	A	"	T=77°F F=504	fine
40/80		6.0	G8 III	B.C.	830/40.2	B.S.	IIaO-E	B	STD UEL	"	fine
							IIaO	A		T=75½°F F=504	
20/120	2-3	4.10	B7 n	B.C.	1200/50.7	B.S.	IIaO-Tef	B	Be-B/n	F=501	
20/120		5.19	B3 III	"	" / "	"	"	A	SB-B/n		
							"				
10/160	3	6.2	2 F5 + G	P.C	1200/50.7	B.S	IIaO-E	B	SB B/n/4y	T=74°F, F=501	fine
10/70	3-4	6.0	G8 III -II	B.C	1200/50.7	B.S.	IIaO-E	A	SB 4y	T=73°F F=501½ TELESCOPE LIMIT	fe str S/wk

261 #2

Date SAT. JULY 14 1984 Observers R. - F/L

Emulsion Batches:
IIaO-E 06103-12074
.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48495	HD 212943	22 22 8	+04°12	03:38	04:12	0h 56m W	+04°42	Fe/-	7-7
48495F	Focus 9 FST					0h 56m W	+04° 42'	Fe/-	30-3

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ....Good.....

Focus .....

Spectr. Temp. ....71°F..... Dome Temp./Hum. ...68°F...86% 262

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
40/100	2-3	5.9	★O III-IV	B.C.	1200/50.7	B.S.	IIaO-E	B	STD VEL	T=72.5 DAWN	fine
"				B.C.	1200/50.7	B.S.	IIaO-I	A		T=71°F F=50½	

263

Sat - Sun.

Date July 14-15, 1934. Observers An.-Ri.....

Emulsion Batches:
Eao-R 06103-12074
.....
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48496	HD 157482	$17^h\ 15.^m6$	+40° 04'	23:25	01:01*	$2^h\ 56^m$ W	+40° 02'	Fe/-	7-7-7
48496F	Focus Test					$2^h\ 58^m$ W	+40° 02'	Fe/-	30-3
						D4	D3	D2	
48496T	SP09 Cal				15 MIN @ 15 VOLTS	3900	9300	4800	

Spectr. Temp. ...80°F..... Dome Temp./Hum. .76°F./.60% Transparency Conditions ....hazy.....

Focus ...500.....

Spectr. Temp. ...78°F..... Dome Temp./Hum. .75°F./.60%

264

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/136	2	6.2	dF8 + G	BC	1200/50.7	BS	IaO-E	A	SB Blu/Ly	T=80°F ; F=500	fine
				"	" / "	"	IaO	B		*No counts for last 30 min.	
							~~IaO-E~~				

265
MON TUE

Date July 16-17 1989 Observers Lg - Ri

5m 68° Emulsion Batches: IIIaJe # 31083-12074
8m 68° Tech Pan E. 06103 - 13074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Emp. Mtr.
48497F	Focus.					00 02W	+19 15	Fe/-	50-8	
48497	HD124897	14 11.1	+19 42	20 23	20 28	01 36W	+19 15	"	25-2	
48498	HD157482	17 18.5	+40 04	20 33.	21 :55	00 02E	+40 00	"	7-7-7	
48498T ✓	SPOT CALC' FOR PLATES 48498-				15 MIN @ 15 VOLTS	@ D4 3900	@ D3 4300	@ D2 4810		
48499	HD164852	17 58.1	+20 50	21:59	22:47	00 40 8W	+20 52	"	12.2-2	
48500	HD 181391	19 15.2	-05 36	22:51	00 20	00 25W	-05 24	"	7-7-	
48500T ✓	SPOT CALC' FOR PLATES 48497+99				15 MIN @ D4	@ 1.50 3900	@ 1.50 4300			
48501	HD183344	19 24.0	-7 15.0	00:31	02 36	02 31W	-7 00	Fe/-	7-7-	
48502	HD217312	22 54.8	+62 32	02 49	04 02	00 27W	+63 04	Fe/-	7-7	
48502F	FOCUS BEST					00 27W	+57 00	Fe/-	30-3	

Spectr. Temp. 73°F Dome Temp./Hum. 67°F 86% Transparency Conditions

Focus 501.5

Spectr. Temp. Dome Temp./Hum. 60°F 99%

266

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50.7	BS	IIIaJ	A		broken.	ok
0'/100		1	K2III	"	"	"	"	B			strong
40/160	3-5	6.2	dF8+G	"	"	"	IIaO-E	A	SB Blu/Ly		fine
							IIaO-E				
20/120		5.2	B3IV	BC	1200/50.7	BS	IIIaJ-E	B	SB · Blu.	71°F set 502	
40/211		6	G8III	"	"	"	IIaO-E	A	H+K-Ly		fine
							IIIa-J+f				
20/120			F5-G3	BC	830/40.2	BS	IIaOE	B	Blu Cap-Ly	68°F set 506	
30/153	3-4	7.2	B0IV	"	1200/50.7	"	"	A	MSB - Ly	67°F set 503	weak
							IIaO-E	B		65°F "	

267 Thurs-Fri

Date 1984 July 19/20 Observers Hk-Ly-Ri

Emulsion Batches:
8"-8" IIaO e06403 - 13074...
5"-8" Tri-X ef 31003 - 15074...

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48503	HD146051	16 09.1	-3 26	21:12	21:20	00 41W		Fe/-	10-10
48504	HD157482	17 18.5	+40 04	21 29	22:22	00 35W	+40 00	Fe/-	7-7-7
48505	HD174403	18 45.2	-20 25	22 34	00 :38	01 22W	-20 17	Fe/-	7-7-7
48506	HD165174	17 59.6	+1 55	00 43	01 50	03 21W	+2 00	Fe/-	7-7-
48506T	SPEC CHAN EQP	PLATES 48503-							
48507	HD157482	17 18.5	+40 04	01 57	03 02	05 16W	+40 00	Fe/-	7-7
48508	HD190993	20 02.6	+23 20	03 07	03 39	03 07W	+23 37	Fe/-	7-7-1
48509	HD211838	22 14.9	-08 19	03 45	04 15	01 30W	-7 50	Fe/-	12-12-
48509F	FOCUS TEST					01 30W	-7 50	Fe/-	30-30

Spectr. Temp. ..73°..... Dome Temp./Hum. ..67°../..82%.. Transparency Conditions ....Sl. hazy.....
→ patchy cloud.

Focus .....

Spectr. Temp. ..67°F..... Dome Temp./Hum. ..62°F../..87%..

268

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	20/16	2-3	4.3	HD.5III	BC	1200/50.7	BS	IIaOe	A	Std Vel.	Some Cirr. At BEGINNING OF Night	fine
	40/160		6.2	dK8+G9	"	"	"	"	B	SB - Blu/Ly		fine but graining!
	30/76		7.5	B6IV	"	830/40.2	"	"	A	SB - Ly	T=72°F Set 505	
	30/185		6.2	B0.5II	"	"	"	"	B	Flu pgm	T=70°F	Fine
	20/320		6.2	dK8+G	BC	1200/50.7	BS	IIaOe	A	SB Blu-Ly	T=69°F Set 502	fair - graining
	30/100		5.0	B3V	"	"	"	IIIaJ ef	B	Ly pgm		
	40/95		5.3	B8V	"	"	"	IIIaJ ef	A	Ly pgm	T=67°F 503	
								IIaO E	B		T=67°F 503	no stellar discard

269 Wed-Thurs

Date July 25-26/84 Observers Klg-Tm

Emulsion Batches:
8"/65° IIaO-E 06103 — 13074
5"/65° IIIaJ-E 31083 —

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48510F	Focus test					0 06W	+7 30	Fe/-	20-20
48510	HD 161096	17 38.5	+4 37	20 32	20 42	1 00E	+4 38	"	10-15
48511	HD 8890A	1 22.6	+88 46	20 51	2058	2 00E	+89 13	"	20-30
48512	HD 137909	15 23.7	+29 27	21 04	21 30	2 01W	+29 12	"	20-
48513	HD 158633	17 25.3	+67 24	21 39	23 18	1 51W	+67 21	"	10-10-1
48513T	Spot Calib for	48510, 12-15,			15 min @ 15V	D4 3900	D3 4300	D2 4810	
48514	HD 195987	20 29.4	+41 32	23 24	01 27	0 53W	+41 53	Fe/-	10-10-10
48514T	Spot Calib for	48511-12, 16,			15 min @ D4	17.5V 3900	15V 4300	15V 4810	
48515	HD 201156A	21 02.7	+33 44	01 35	3 29	2 21W	+34 06	Fe/-	7-7-7
48516	HD 209790	22 00.9	+64 08	3 37	4 20	2 15W	+64 34	"	20-20

Spectr. Temp. ...73°f..... Dome Temp./Hum. 70f / 70a Transparency Conditions: hazy - photometric.....
Focus ....503..... "La Via Lacta!"
Spectr. Temp. ..64°f..... Dome Temp./Hum. 58f / 88a 270

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50.5	BS	IIaO-E	A			ok
20/50	2"	39	KIII	"	"	"	"	A	STD VEL		
0/113	2"	2	F	"	"	"	IIIaJ-E	B	1½AsmSp	some cloud	uneven
0/103	1"	3.9	FOp	"	"	"	"	A	"	≈ 2' hiss	fine
0/105	1"	7.1	GKI	"	"	"	IIaO-E	B	"	T = 21°C	fine
							"				
0/204	1-2"	7½	G9V	BC	1200/50.5	BS	"	A	Asm Sp		fine
							IIIaJ-E			close double ½ split, track lower lobe	
80/100	2½"	7.3	AJ	BC	830/40.5	150/3	DaO-E	B	Asm Sp	ie SW of pair (barely split)	
0/94	1-2"	4.6	A3m	"	1200/50.7	BS	IIIaJ-E	A	"	sets 504 T = 54°F; OXO fine comp lines doubled. Comp. slit	
										clouds; high fog in wings & exc — developed with IIaO	
			Note	slit 4th lens			Note	July 28		This last exposure	
			left in, in addition				may not have had BS far enough out for				
			to correct lens				full efficiency or any thing else.				
							(Note image quality)				

27) 1 Large Tour (Ring Nebula)
Sat Sun

Date July 28-29/84 Observers T.L

Emulsion Batches:
II.aE 06103 — 20074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48517	HD 157482	17 18.5	+40 04	23 01	00 40	3 30 W	+40 03	Fel—	10-10-10
48517V	Spot Calib	for 48517	—19 *		15 min @ 15V	D4 3900	D3 4300	D7 4810	
48518	HD 195987	20 29.4	+41 32	00 45	03 20	3 00 W	+41 54	Fel—	10-10-10
48519	HD 222368	23 34.8	+5 05	03 24	03 40	0 11 W	+5 35	11	15-15
48519F	Focus test					11	11	11	
		* Same Spot plate for next night					11:0-E		

Spectr. Temp. 70°f Dome Temp./Hum. 63°f / 83% Transparency Conditions Fine

Focus 503

Spectr. Temp. 64°f Dome Temp./Hum. 60°f / 89%

272

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		0/160	2"-3"	6.2	4F8G	BC	1200/5000	BS	IIaO-E	A	SB Ly	20°C	Fe s/s+r Fine
									IIaO-E				
		0/202	2"	7.87	69V	BC	1200/5000	BS	"	B	Hamp Sp	65°f	Fe s/s+r Fine
		0/50	2"-3"	4.6	F7V	"	"	"	"	A	std/vel		Fe s/s+r Fine
						"	"	"	IIaO	B		T=64°f 6/503	cent b/w
							Note comments on Std lens July 25-26						

1984 273

Date Sun: Mon. Jul. 29-30 Observers K.Ly. - T.N.

Emulsion Batches:
IIa-E 0603-20074
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48520	HD 137909	15 23.7	+29 27	20:55	21 35	2 22W	+29 11	C/-	15+15
48521	HD 158633	17 25.3	+67 24	21:53	0 01	2 49W	+67 21	"	10+10
48522	HD 8890A	01 22.6	+88 46	0 08	0 20	5 54E	+89 13	"	15-15
48523	HD 196524	20 32.9	+14 15	0 31	0 09	0 46W	+14 35	"	15-15
48529	HD 197989	20 42.2	+33 36	1 15	1 23	0 53W	+33 36	"	15-15

Spectr. Temp. ...74°F..... Dome Temp./Hum. 71°/60% Transparency Conditions ...Cloudy: hazy.....

Focus ....5.02.....

Spectr. Temp. ...70°F..... Dome Temp./Hum 65°F/80%

274

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
0/100	2"	3.9	F0p	BC	1200/ 50.7	BS	IIaO-E	A	KiAsm5p	cloudy 23°C	fair
30/	1-3/4	7.1	dK1	"	"	"	"	A	"	hazy-cloudy 22.5°C	wk
30/52	"	2	F	"	"	"	"	A	"	" 22°C	str
20/30	"	V 3.78	F5IV	"	"	"	"	A	"	"	fair
0/100	"	3.6	K0III	"	"	"	"	B	"	21°C	str
									H1 Fe	ABGS sl str	
					Note	comments on			fl lines	Dec type	

275

Date Mon-Tues. July 30-31 Observers K.L.G.-T.L.

Emulsion Batches:
IIaO-E 0603-2007
5"68° IIaJ-E 31083 15074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48525F	Focus test					0 10		Fe/-	30-3
48525	HD 156014	17 10.1	+14 30	20 17	20 44	0 15E	+14 27	"	17-2
48525T	Spot calib for 48525-27								
48526	HD 161096	17 38.5	+ 4 37	20 45	20 58	0 27E	+4 38	Fe/-	25-3
48527	HD 8890A	1 22.6	+8846	21 05	21 10	8 59E	+89 14	"	25-2
48528	HD 158633	17 25.3	+67 24	21 16	22 43	1 35 W	+67 26	"	10-1
48528T	Spot Calib for 48528,29,31.				15 min @ 15V	D4 3900	D3 4300	D2 4810	
48529	HD 201156A	21 02.7	+33 44	22 54	01 21	0 34 W	+34 06	Fe/-	10-10
48530	HD 209790	22 00.9	+64 08	01 28	1 55	0 1 E	+64 35	"	25-25
48531	HD 221264	23 25.5	+30 18	2 01	4 21	0 1 W	+30 48	"	10-10

Spectr. Temp. 75.5 Dome Temp./Hum. +72°/57% Transparency Conditions . S.l. hazy

Focus 502-501-502

Spectr. Temp. 70°F Dome Temp./Hum. +65°/92%

276

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50.7°	BS	IIaO-E	B		Set 502 T=75.5	OK
C/111/	<1"	4.4	M5Jb	"	"	"	IIIaJ-E	B	MStd Vel	set 501	fine
							IIIaJ-E				
-/104	<1"	3.9	KOIII	BC	1200/ 50.7	BS	IIIaJ-E	A	STDVEL		s/str
-/105	<1"	Z	F	"	"	"	"	B	KKAsmSp	$\alpha = 2^h24^m.3$	s/str
-/100	<1"	7.09	dKT	"	"	"	IIaO-E	A	MStd Sp	23°C	fine
							IIaO-E				
BC/130	1"	7.3	A2	BC	1200/ 50.7	BS/ .3	IIaO-E	B	KKAsmSp	22°C 1pc saved set 502	Fe str fine
-/100	1-½"	4.6	A3m	"	"	BS	IIIaJ-E	A	"	22°C	fine
BC/190	1"	7.7	F5	"	"	"	IIaO-E	B	"	dawn	Fe wk fine
				Note* BS exps #48516 Thru 48528 had the Slit Comp Fld Lens in as well as the corr. Fld Lens.							

277 Pg #1 (Spot Focus Plate) - Done 5m 60s

Date Aug. 7.8/84 Tue. Wed Observers J.A. - H.L.

Emulsion Batches:
IIIa-J-E 31083 - 30071
IIa-O-E 06103 - 30074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48532F	Focus test					0 10W	+29 11	Fe/-	40-40
48532	HD 137909	15 23.7	+29 27	20 11	20 29	1 50W	+29 14	Fe/-	20-20
48533	HD 161096	17 ~~38.5~~ 39.5	+1 ~~37~~ 34	20 31	20 55	0 03W	+4 40	Fe/-	23-23
48533T	Spot Calib for 48532	33,35-43		15 min @ D4	17.5V 3900	15V 4300	15V 4810		
48534	HD158633	17 353	+67 24	21 03	22 22	146 W	+67 21	Fe/-	8-8
48535	HD 8840A	1 22.4	+8 46	22 26	23 32	705E	+89 13	"	23-23
48536	HD 209790	22 00.9	+64 08	22 39	23 06	208 E	+64 37	"	15-15
48536T	Spot Calib for 48534	44.		15 min @ 15V		D4 3400 D3 4300	D7 4810		
48537	HD 182640	1920.5	+2 55	23 12	23 38	0 52W	+3 10	Fe/-	23-23
48538	HD 196524	2032.9	+14 15	23 41	23 47	00W	+14 35	"	23-23
48539	HD 197989	2042.2	+33 36	23 51	0000	00W	+33 58	"	23-23
48540	HD 206901	21 40.1	+25 11	00 04	00 24	0 25E	+25 37	"	23-23
48541	HD 211675	22 07.3	+41 47	00 21	0041	1 30E	+42 19	"	23-23
48542	HD217752	22 58.0	+42 13	0045	0125	0 45E	+42 45	"	23-23
48543	HD219680	23 08.0	+49 51	1 30	1 54	0 27E	+49 24	"	23-23

Spectr. Temp. 82.5°F Dome Temp./Hum. 77°F/73% Transparency Conditions ... Fine → Sl. hazy → thin cloud

Focus ... 501

Spectr. Temp. ... Dome Temp./Hum. .../...

278

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/5007	BS	IIaO?	B		too wk to measure V sl blue	
30/107	1"	3.9	F0p	"	"	"	IIIaJ-E	A	Asm-Sp		fine
30/100	1-2"	3.9	K2III	"	"	"	"	B	std vel	likely Fe comp. star (no interlock when manual)	fine
							IIIaJ-E				
30/200	2"	7.09	dK1	BC	1200/5007	BS	IIaJ-E	A	Asm-Sp		good
30/105	1-3"	2	F	"	"	"	IIIaJ-E	B	"		fine
30/102	1-2"	4.6	F3m	"	"	"	"	A	"		good
							IIaO-E				
30/102	1-2"	3.7	F0IV	BC	1200/5007	BS	IIIaJ-E	B	Hsm-Sp		good
30/105	"	3.8	F5IV	"	"	"	IIIaJ-E	A	"		good
30/104	"	3.6	K0III	"	"	"	IIIaJ-E	B	"	Set 502 T=77°F	fine
30/103	"	4.4	F5IV	"	"	"	"	A	"		good
30/115	2	3.6	B6p	"	"	"	"	B	"		good
30/116	2	6.2	A2	"	"	"	"	A	"		good
30/105	1"	4.4	F0IV	"	"	"	"	B	"	Are you reset after 2" hsm?	good

279

Date Aug. 7 & 8 cont. Observers .....

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
18544	HD 221264	23 55.5	+30 18	0200	412	1 30W	+29 49	Fcl-	8-

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. +68°F / 98% 280

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1216	2"	7.7	F5	BC	1200/30.7	BS	IIaO-E	A	[illegible]	Clouds	Fair wk sl wk
					K.K. Plate IIIaJ needs prepared.						
					These 2 Full IIaO box in vacuum freezer						
										Thanks	
										Jim.	

281 Thurs-Fri

Date Aug. 9-10/84 Observers Tm. - Das.

Emulsion Batches: 8" 68° IIaO-E 0803 - 30074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48545	HD 128167 (ε Boo)	14 30.3	+30 11	21 05	21 20	3 43W	+29 52	fcl-	10-10
48546	HD 134083 (45 Boo)	15 02.9	+25 16	21 22	21 50	3 41W	+24 59	"	10-10
48547	HD 195987	20 11.9	+41 32	22 09	23 23	0 10E	+41 56	"	777
48547	TV Spot Calib for 48545-49				15 min	@ 15V	D4 3900 D3 4300	D2 4810	
48548	HD 211336	22 11.4	+56 33	23 29	23 38	0 40E	+57 01	fcl-	10-10
48549	HD 186791	19 41.5	+10 22	23 48	23 56	0 10W	+	"	10-10
48549F	Focus test					"	+10 38	"	20-20

Spectr. Temp. 81°F Dome Temp./Hum. 80F / 80% Transparency Conditions ... Sl. hazy

Focus ... 502

Spectr. Temp. ... 77°F Dome Temp./Hum. 76F / 98%

282

Comparison/Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	30/40	1"	4.81	F2V	BC	830/402	BS	IIaO-E	A	Algol/prog		fine
	30/40	1"	5.36	F5V	"	"	"	"	B	"		fine
	30/170	1"	7.87	G9V	"	"	"	"	B	Asm Sp		good
								"				
	30/146	1"	4.46	F0IV	BC	830/402	BS	"	A	Algol/prog	26°C	Sl. strong
	30/40	1.5"	4.1	K3II	"	"	"	"	A	Sp/UV		Sl. strong
					"	"	"	"	B			

283 Wed-Thur

Date Aug 15-16/84 Observers Tn-Das

Emulsion Batches: 8m 68° IIaO-E 06103 30074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48550	6 Boo HD 128167	14h30m3	+30°11′	1957	2016	3 00W	~~+29°49′~~	Fel—	10-10
48551	1 Oph HD 152614	16h49.3	+10°20′	2020	2029	0 55W	~~+10° 11′~~	"	10-10
48552	45 Boo HD 134083	15h2.9	+25°16′	2033	2106	3 24W	~~+24 58′~~	"	10-10
	53 Her ~~HD 15 2598~~	16h49.2	+31°52′						
48552F	Focus test					0 0	+24 58	Fel—	20-20
48552T	Spot calc for 48550-52				15min.	15W	D4 3900 D3 4300	D7 4810	

Spectr. Temp. 81° F Dome Temp./Hum. 80°F / H = 63% Transparency Conditions Some cloud - mucho cloud

Focus 5.02

Spectr. Temp. 80°F Dome Temp./Hum. 176F / H = 70%

284

Comparison Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		——	1"	4.46	F2 V	BC	830/40.2	BS	IIaO-E	A	Algol prog	fe slit	Fine
	16	20/40	1"	4.38	38 V	"	"	"	"	B	"		v st stn
	16	20/40	1"	4.93	F5 V	"	"	"	"	A	"	Clouds moving in	fair comp stn.
				~~5.32~~	~~F0 V~~								
						BC	830/40.2	BS	IIaO-E	B	sel 502	T 80°F	
									IIaD-E				

285 Thurs Fri

Date Aug 16-17/84 Observers Ly-Tn

Emulsion Batches: 8m68 IIaO-E 06103-15084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48553F	Focus test					00 25W	+31 45	Fe/—	20—?
48553	HD152598	16 49.2	+31 52	19 58	20 44	01 15W	+31 46	Fe/—	10—10
48554	HD183344	19 24.0	−7 15.0	20 57	22 22	00 19W	−7 00	Fe/—	7-7-7
48555	HD182572	19 20.2	+11 44	22 26	23 01	01 03W	+11 57	Fe/—	10-10
48555T	Spot Calc	for 48553-56		15 min	15V	D4 3900 D3 4300 D2 4810			
48556	HD181391	19 15.2	−5 36	23 11	01 11	03 17W	−5 24	Fe/—	11-11

Spectr. Temp. 80°f Dome Temp./Hum. +70°f / 91% Transparency Conditions hazy ... hazy

Focus 502

Spectr. Temp. 70°f Dome Temp./Hum. +64 / 99%

286

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				3C	830/40.2	BS	IIIaJ*	A	*older batch	prob set stellar comp	stellar weak
20/41	3-5"	5 3	FOV	"	"	"	IIaO-E	B	Algol pgm		faint strong sl. comp stellar strong
/163	3-5	~~8~~	FS-63	"	"	"	"	A	Bin Cyg - Ly	T=77°f Set 50f	good +
20/35	3	5.2	G8IV	"	"	"	"	B	Std Vel		fine
							"				
0/47	3"	6.0:	G8III	BC	1200/47°	150/5	"	A	H+K - Ly	Set 50 T=73°f	H+K weak ov. V. strong
										T=70°f	
										Cloud	
						Slit should have less than slicer				comparison exposure	

287

Date Aug 17-18/84 Fri-Sat ..... Observers Ly-Th .....

8" 68° Emulsion Batches: IIaO-E 06103 — 15084
5" 68° IIIa J-E 31083 — 30074

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48557F	Focus test					0 10W	+45	Fe/—	20-20
48557	HD120315	13 43.6	+49 49	19 50	19 57	3 31W	+49 21	Fe/—	10-10
48558	HD128167	14 30.3	+30 11	19 59	20 08	3 03W	+29 84	"	10-10
48559	HD134083	15 02.9	+25 16	20 11	20 24	2 45W	+2459	"	10-10
48560	HD152598	16 49.2	+31 52	20 29	20 43	1 19W	+3146	"	10-10
48561	HD157482	17 18.5	+40 04	20 47	21 40	1 48W	+40 00	"	8-8
48561T	Spot Coil for 48557-61,			63,65		15m @15V	D4 3900 D3 4300		D7 4210
48562	HD164852	17 58.1	+20 50	21 43	22 29	1 56W	+20 55	Fe/—	15 16
48563	HD181391	19 15.2	-05 36	22 32	00 10	2 20W	-5 24	Fe/—	8-8
48563T	Spot Coil for 48562,			64	15 min @	D4 17.5V 3900	15V 4300	15V 4810	
48564	HD175426	18 50.2	+36 51	00 14	01 08	3 44W	+3700	Fe/—	15-12
48565	HD217312	22 54.8	+62 32	01 12	03 10	1 42W	+63 01	Fe/—	8-8
	HD11488	01 44.9	+46 58	03 17			+47 23		

Spectr. Temp. 72°f Dome Temp./Hum. 68°F/67% Transparency Conditions sl. hazy

Focus 5.03

Spectr. Temp. 63°F Dome Temp./Hum. 56°F/85%

288

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50.7	BS	IIaO	A			OK
20/50	1"	1.7	B3V	"	"	"	IIaO-E	A	MK std		Fine
20/40	1"	4.46	F2V	"	830/902	"	"	A	Algol Pair	Set 506 5 Boo	Fes/str fine
20/42	2"	4.93	F5V	"	"	"	"	B	"	45 Boo	Fes/str fine sl flexure?
20/40	2"	5.3	F0V	"	"	"	"	A	"	53 Her	fine
20/80	3"	6.2	F6+G	"	1200/50.7	"	"	B	SB - Blu/Ly	72°F Set 503	Fine
							"				
20/137	2"	5.2	B3IV	BC	1200/50.7	BS	IIIaJ-E	A	S3 - Blu		
20/103	3"	6	G8III	"	"	"	IIaO-E	B	H+K - Ly		Fine
							IIIaJ-E				
20/125	2-3"	5.3	B3	BC	1200/50.7	BS	IIIaJ-E	A	SB - Ly	68°F Set 504	
20/195	2"	7.2	B0III + B0IV	"	"	"	IIIaO-E	B	SB - Ly		Fes/str sl wk K
		7.1	B8	"	830/902		"	A	SB - Ly	64°F Set 505 ~~kick~~ closed (for SW)	

289 Sun-Mon

New D19

5m 68°

Emulsion Batches: IIIaJ-E 31083 -13084

Date Aug. 19-20/84 Observers Kly-Jas

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48566F	Focus test					0 0	+1715	F/-	20-20
48566	HD 153912	19 26.7	+27 45	20 05	22 36	04 W	+2800	Fe/Ne Wrg	7-7-7
						17.5V	19.5V	15V	
48566TV	Spot Cal for 48566-70				15min@D4	3600	3700	4300	
48567	HD 202109	21 08.7	+29 39	22 40	00 50	1 14 W	+30 12	Fe/Ne Wrgg	7-7-
48568	HD 215182	22 38.3	+29 42	00 53	02 22	1 18W	+30 11	"	7-7-
48569	HD 17878	2 47.2	+52 21	02 29	4 20	0 56E	+52 46	"	7-7-7
48570	HD 8538	1 19.3	+59 43	04 23	4 54	1 06W	+6013	"	10-10
48570F	Focus test					0 0	+3130	"	20-20

Spectr. Temp. ..70°F..... Dome Temp./Hum. 165°/5%? Transparency Conditions ... Fine - cloudy - fine.

Focus 506.....

Spectr. Temp. .....570K..... Dome Temp./Hum. 150°/88%?

290

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	230/40°	BS	IIaO	A	Set 506 T=70°F		OK
*											
0/404	2'	B=4.2 U=4.7	K5 II + E	BC	1200/47°	150.5	IIIaj-E	A	KK UV	UV filter on slit Set 506	comp work
							"				
20/298	2½'	B 4.2	G8II	BC	1200/47°	150.5	"	B	KK UV	same cloud Set 506 T=64°F	"
20/300	7	B=3.8 U=4.3	G8II + F	"	"	"	"	A	"		"
20/230	2¼'	B≈ 4.1	G5III + A5	"	"	"	"	B	"	Set 507 T=60°	"
00/-20	"	2.1	A5V	"	"	"	"	A	"		"
				"	"	"	"	B		Set 507 T=57°F cont's/blue	

Plates useless — instead of UV transmitting filter, The minus UV filter was used

* miscommunication from KK did 4 x 4 x (yellow) UVig

2911 1984

Date Tues. Wed. Aug 21/22 Observers .. K.Ly.-T.n.....

Emulsion Batches:
IIaJ-E 31093 - 13084
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48571	HD 183912	19 26.7	+27 45	20:05	21 51	0 05W	+2800	WR66 FeNE	88
48571 T/	Spot Calib for 48571-73				15 min @ D4	17.5V 3600	17.5V 3900	15V 4300	
48572	HD 202109	21 08.7	+29 39	21:54	23 43	015W	+3014	WR64.6 FeNE	8-8
48573	HD 215182	22 38.3	+29 42	23 47	00 44	013E	+3013	"	88
48573 F	Focus test					0 0	"	"	11-11

Spectr. Temp. 73°F Dome Temp./Hum. 68°F/80% Transparency Conditions good

Focus 503

Spectr. Temp. 68°F Dome Temp./Hum. 62°F/100%

292

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
Cl. 40	1"	4.2	K5II + B	BC	1200 / 47°	150 / 1.5	IIIaJ-E	B	KK UV	Exp meter "B" filter in UG-5 filter in	Fine
							IIIaJ-E			(the night one)	
0 / 180	1"	4.2	G8II	"	1200/47°	150/1.5	IIIaJ-E	A	KKUV std	"	Fine
0 /	1"	3.8	G8II + F	"	"	"	"	B	KK UV		Fine somewhat
				"	"	"	IIaO	B	Set 3035 thru	Dome dropping too bad.	OK
				Note - Total of 5 IIIaJ strips - Emulsion 145 in 2 boxes.							
										Hope you need more.	IIaO OK as before.

293

Date Aug 23-24/81 (Thurs-Fri) ..... Observers ..TJT.....

Emulsion Batches:
IIIa-J-E 31023-3001a
IIIa-O-E 06103-15084
8m 680

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48574	HD 164852	17 58 1	+20 50	21 55	22 50	2 40W	+	Fd-	16-?
				175V	15V	15V			
48574T	Spot Calib for 48574		15min	@D4	3900	4300	4810		
48575	HD 217312	22 54 8	+62 32	22 56	01 09	0 03W	+63 02	Fd-	9-?
						D4	D3	D2	
48575T	Spot Calib	for 48575		15min	@15V	3900	4300	4810	

Spectr. Temp. 65°F ..... Dome Temp./Hum. +60°/92% Transparency Conditions .. Fine .....

Focus .... 5.05 .....

Spectr. Temp. 62°F ..... Dome Temp./Hum. +56°F/97% 294

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
120/130	4"	5.19	P3 IV	BC	1200/507	BS	IIIaJ-E	A	SB B/a	(filter wheel turned) middle Arc location	Comp slit v slwk
							"				
120/260	3"	7.2	B0 IV	BC	1200/507	BS	IIaO-E	B	SB-Ly		good
							"				

KK white comp on IIaJ?
Only 4 s/l pairs not taken
I didn't check out BC

295

Fri - Sat

Date Aug 24-25.84 Observers TL

Emulsion Batches: Mar-E 31083 -13084

Mar-E 31083 -13084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48576F	Focus test					0 15 W	+31 30	Fe/-	45 45
48576	HD 138749	15 28.9	+31 42	19 50	20 08	2 30 W	+31 28	Fe/-	15 15
48576TV	Spot Calib for 48576-77.				15 min @ D4	17.5V 3900	15V 4300	15V 4200	
48577	HD 164852	17 58.1	+20 50	20 12	20 51	0 45 W	+20 53	Fe/-	15 15
48578	HD 183412	19 26.7	+27 45	20 58	22 40	1 06 W	+27 58	FeNe	11 11 11
48578TV	Spot Calib for 48578-80				15 min @ D4	17.5V 3600	17.5V 3400	13V 4300	
48579	HD 215182	22 38.3	+29 42	22 45	00 04	0 40 E	+30 14	FeNe	13 13 13
48580	HD 3712	00 34.8	+55 59	00 12	01 31	1 11 E	+56 29	"	19 19

Spectr. Temp. +68°F Dome Temp./Hum. 63% / 80% Transparency Conditions Fine

Focus 504

Spectr. Temp. +62°F Dome Temp./Hum. 58% / 92% 3 Cats 296

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/50.7	BS	IIIaJ-E*	A			OK
20/146	<1"	4.10	B7nn	BC	"	"	IIIaJ-E*	A	Le-Blu	broken 1pc saved	Fine
							IIIaJ-E*				
2/140	<1"	5.19	B3 II	BC	1200/50.7	BS	IIIaJ-E*	B	SL Blu	broken (1" missing)	Fine
20/140	1"	4.2	K5 II + B	"	1200/47°	150/15	IIIaJ-E	A	UV prog	(WR6) (+B" filter) (Exp meter) + UV 4G-5 filter	comp wk Fine
							"			Broken 2pcs saved	
20/140	1"	38	G8II + F	BC	1200/47	150/5	"	B	UV Prog	(not broken) star fine comparison just adequate — uneven bkgnd	
20/160	2"-3"	2.5	~~K0~~ IIIa	"	"	"	"	A	UV sl Veiled	T=63° Sa + 505	ditto
										T=	
							Strange background fog on IIIaJ's				

297 Sat Sun 2 Large Tons Earlier

Date Aug 25-26/84 Observers Tn

Emulsion Batches: IIa-O-E 06103 — 17084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48581	HD 217312	22 54.8	+62 32	23 57	01 29	03 W	+63 01	Fe/—	888
48581T	Spot Calib for 48581-82			15 min @ 15V		D4 3400 D3 4300	D2 4810		
48582	HD 3712	0 34.8	+55 59	01 34	01 40	1.00 E	—	Fe	142

Spectr. Temp. 68°F Dome Temp./Hum. +63°/90% Transparency Conditions OK Hi cloud(some)

Focus 504

Spectr. Temp. 67°F Dome Temp./Hum. +61°F/95%

298

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
10/220	1-2"	7.2	BO IV	BC	1200/507	BS	IIaO-E	A	SB Ly		s/wk
							IIaO-E				
0/55	2"	25	HO IIIa	BC	1200/507	BS	IIaO-E	B	std vel		fine

2q9 Sun N'or

Date Aug 26-27/84 Observers T.A.-K.L.

Emulsion Batches:
8"/68° IIaO-E 06103-17084
5"/68° IIIaJ-E 31083-34084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48583E	Focus test							Fe/—	2 25 25
48583	HD161096	17 37.5	+4 37	19 36	19 41	0002W	+4 38	Fe/—	10-10
48584	HD137909	15 23.7	+29 27	20 01	20 04	241W	+29 11	"	10-10
48585	HD 201156A	21 02.7	+33 44	2024	23 00	000W	+34 06	"	7-7-7
48585TV	Spot calib for	48583-	85,87-88	15min@	15V				
48586	HD 209790	22 00.9	+64 08	23 08	0347	011E	+64 36	"	15-15
48586TV	TV Spot Calib for	48586			15min@	D4	17.5V 3900	15V 4300	15V 480
48587	HD 6582	1 01.6	+54 26	23 50	0038	225E	+5453	Fe/—	10-
48588	HD 6961	1 05.0	+54 37	0048	0051	215E	+5508	"	10-10
48589	HD 215182	22 38.3	+29 42	1 13	02 49	2 12W	+30 11	Fe Ni Cu +6	2
48589TV	TV Spot Calib	for 48589-90			15min@	043	17.5V 3600	17.5V 3900	15V 4300
48590	HD17878	02 47.2	+52 21	2 55	0506	020W	+52 47	Fe Ne wr 6 +6	20-2

Spectr. Temp. ..73.5°F..... Dome Temp./Hum. 70°F / 70% Transparency Conditions ..OK - cloudy.....

Focus .....503.....

Spectr. Temp. ..66..... Dome Temp./Hum. 60°F / 90% 300

Comparson Filter	Comparson Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
						BC	1200/50.7°	BS	IIaO-E	A		s/Red	
		39/40	<1"	3.9	K2III	BC	1200/50.7°	BS	"	A	stdvel		fine
K-1		40/40	"	3.93	F0p	"	"	"	"	A	Asm Sp KK		fine
		39/2(4)	1-3"	7.3	A2	"	"	150/13	"	A	"	some cloud	fine
K-1		39/126	2"	4.63	A3m	BC	1200/50.7	BS	IIIaJ-E	B	Asm Sp KK	some cloud	Fine
									IIIaJ-E				
K		40/58	3"	5.81	G5Vp	BC	1200/50.7	BS	IIaO-E	A	Asm Sp	cloud	fine
		C/55	"	4.50	KIII	"	"	"	"	B	"		fine
Pb		C/139	"	3.8	G8III + F	"	1200/ A7=	150/15	IIIaJ-E	B	KK'UV	T=6ET Sat 504 star comparison between up	fine
									"		"		
		39/75	2-3"	V 3.09	G5III +A5	BC	1200/47	150/15	"	A	KK UV	cloud, Note All exp at beginning & end of exposure. cloud during UVK	very dusty slit?
						KK	Note	None	Red in Blue			NO; (Spot guiding included)	

301 Wal-Thuis

Date Sept. 5 6/84 Observers Ly - Th

8" 68° Emulsion Batches: IIaO-E 06103 -1.7084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48591	HD 181391	19 15.2	-05 36	21 40	00 06	3 30 W	-5 22	Fe/-	9-1-9
48592	HD 1337	0 12.4	+50 53	00 14	01 16	0 16 E	+51 21	"	7-7-7
48592T	Spot Calc for 48591-93				15 min 15V	D4 3900	D3 4300	D3 4810	
48593	HD 9746	01 30.3	+48 12	01 24	02 07	0 42 E	+48 42	Fe/-	7-10
48593F						"	"	Fe/-	"

Spectr. Temp. +58°F Dome Temp./Hum. +52F/99% Transparency Conditions Sl. hazy ... sl. cloudy

Focus 507

Spectr. Temp. +53.9F Dome Temp./Hum. +48°F/98%

302

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/105	2"-3"	~6	G8III	BC	1200/507	2S	IIaO-E	A	H+K-Ly	broken / press saved	Fa s/str Fine
20/62	3"	6-1	09III	"	"	"	"	B	SL Ly	T=55°F	Fine
							"				
40/27	2"-3"	7-1	gK1	BC	(1200/507	2S	IIaO E	A	H+K-Ly	cloud.	Sl wk
				"	"	"	"	A	T-53°F set 507		

303

Date Sept 6-7/84 Thurs-Fri. Observers Ly.-Tm.

Emulsion Batches:
IIaO-E 06103-05094
IIIaJ-E 31083-31084

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48594	HD181391	19 15.2	-5 36	21 12	23 17	02 45W	-5 22	Fe/-	6-6-6
48594T	Spot Calib for	48594,96			15min @ 15V		D4 D3 D2 3900 4300 4810		
48595	HD175426	18 50.2	+36 51	23 23	00 05	01 00W	+37 00	Fe/-	12-12-12
48596	HD217312	22 54.8	+62 32	00 10	01 40	01 31W	+63 02	"	6-6-6
48596T	Spot Calib for 48595,97				15min @	D4 17.5V 3900	15V 4300	15V 4810	
48597	HD1337	00 12.4	+50 53	01 45	02 37	01 08W	+51 24	Fe/-	
48598	HD11188	01 44.9	+46 58	02 43	03 43	00 43W	+47 23	Fe/-	6-6-
48599	HD3712	00 34.8	+55 59	03 47	03 51	02 00W	+	Fe/-	16-16
48600	HD91948	10 31.9	+60 38	04 03	05 00	06 48E	+60 13	Fe/-	6-
48600F	focus					00 00	+26	"	
48600F1	Focus tests done Sept 14. Dome temp 59°f					0 0	+9°	Fe/-	14-14
F2						"	"	"	"
F3						"	"	"	"
F4						"	"	"	"

Spectr. Temp. 61°F ..... Dome Temp./Hum. ~~1607~~ / 80 % Transparency Conditions ..Some cloud ... at start ..
Focus ... 506 ..... than at earlier.
Spectr. Temp. ..... Dome Temp./Hum ~~1517~~ / 99 .. 304

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
2/150	1-3/4"	≈6	G8III	BC	1200/50°	BS	IIaO-E	A	H-K-Ly	some cloud	Fe/str Fine
							IIaD-E				
2/150	1"	5.3	B3	Bc	1200/50°	BS	IIIaJe	B	SB-Ly	T=60°F	fine
10/110	1"	7.2	BoIV	"	"	"	IIaOe	A	SB-Ly		v str bk
							IIIaJ-e				
5/150	<1"	6.1	O9III	Bc	1200/50.7	BS	"	B	SB-Ly		fine
5/118	<1"	7.1	B2	"	"	"	IIaD-E	A	SB-Ly	56°F set 507	fine
2/92	<1"	2.5	K0III	"	"	"	IIIaJ-E	B	Std Vel		fine
2/57	"	7.4	F8	"	"	"	IIaO-E	A			slwk
				"	"	"	IIaD	B		56°F	cen str blue
Optics for slit except for ½ lens over slit					1200/47°	150/9	IIaO	B	set 509 T=62°F	UV filter in	OK
	½				"	"	"	B	set 504 T=62°F	"	cen str blue
	"		"		"	"	"	A	set 504 T=62°F	"	cen str blue
proper optics for s/cer					"	BS	"	B	"	" no UV filter	blank

365 Mon-Tues

Date Sept 17 18/84 Observers L.G.-T.A.

Emulsion Batches: 8" 68° IIaO-E 06103 -05094
IIaJ-E 31083 -10824

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48601	HD183344	19 24.0	-7 15	19:07	20:56	00 59 W	-7 02	Fe/-	6-6-6
						D4	D3	D2	
48601T	Spot Calib for 48601-2,04				15 min @ 15V	3900	4300	4210	
48602	HD192713	20 11.2	+23 12	21:13	22 28	01 44 W	+23 30	Fe/-	7-7-7
48603	HD175426	18 50.2	+36 51	22 33	23 23	04 01 W	+37 02	Fe/-	12-12-1
						17.5V	15V	15V	
48603T	Spot Calib for 48603				15 min @ D4	3900	4300	4210	
48604	HD217312	22 54.8	+62 32	23 29	01 20	01 54 W	+63 04	Fe/-	7-7-7
48604/F1	focus					00 00	+15 00	Fe/-	20-20
4F2	"					"	"	"	20-20

Spectr. Temp. ...63°F..... Dome Temp./Hum. 60°F / 73% Transparency Conditions .V. S/ hazy .....

Focus ...506.....

Spectr. Temp. ...58°F..... Dome Temp./Hum. 55°F / 95% 306

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
200/?	2"	≈8	F5 -G3	BC	830/402°	BS	IIaO-E IIIaO-E	A	Cap Bi-Ly	No exposure meter.	Fe str; blurry v s/lost
2	1"-2"	6.2	G3 IIb + B9	BC	1200/48	BS	IIaO E	B	Fe Pgr	62°F set 507	s/str
	2"	5.3	B3	BC	1200/507	1	IIIaJ-E IIIaJ-E	A	SB-Ly.		Fine
	1-2"	7.2	B0 III	BC	1200/507	BS	IIaO-E	B	SB-Ly	cloud	Fe s/wk fine
				"	"	"	"	B	T=58°F	set 507	Cap+s/ blue.
				"	"	"	"	"	Broken		

307 Tues-Wed

Date Sept 18-19/84 Observers Kly-Tn

6"×6° Emulsion Batches: IIIa-F 31083 -31084

8"×8° IIaO-E 06403 -17014

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp
48605F	I Focus tests to compare PMs AcB					0 0	+11°	Fe/—	20-12
05F2						0 0	"	"	"
48605	HD 161096	17 385	+4 37	18 53	19 09	1 01W	+4 38	"	18-12
48606	HD 137909	15 23.7	+29 27	19 14	19 29	336 W	+29 14	"	18-15
48606T	Spot Calib for 48605-06				15 min @	17.5V D4 3900	15V 4300	15V 480	
48607	HD 192713=22Vul	20 11.2	+23 12	19 46	22 53	2 14 W	+23 32	FeNe UV6 D3 4300	7-7
48607T	Spot Calib for 48607-12.				15 min @	15V D4 3600	D4 3900		
48608	HD 202109	21 08.7	+29 39	22 58	23 42	205 W	+30 15	FeNe UV6	8-8
48609	HD 215182	22 38.3	+29 42	23 44	00 15	107 W	+29 13	"	8-
48610	&Cas: HD 8538	1 19.3	+59 43	00 19	00 30	120 E	+60 14	"	8-8
48611	HD 17878	2 47.2	+52 21	00 34	1 41	136 E	+52 44	"	8-8
48612	HD 18925	2 57.6	+53 07	1 48	2 16	1 11 E	+53 32	"	8-8
48612F	Focus test					1 05 E	"	FeNe UV6	12-12

Spectr. Temp. 63.5°F Dome Temp./Hum. 617/65 % Transparency Conditions V.sl cloudy
Focus 5.07 Windy SW
Spectr. Temp. 59.5°F Dome Temp./Hum. 58/1906 308

Comparison/Filter Exp	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					BC	1200/507	BS	IIaO	B			OK
					"	"	"	"	A		cent sl red	
	20/100	1"	3.9	K2III	"	"	"	IIaJ-E	A	std vel		fine
	20/136	1-2"	3.93	F0p	"	"	"	"	B	Asm Sp		fine
								"				
	00/295	2"	6.2	G3III +2A	BC	1200/47°	150/1.5	IIaO-E	A	Fe prox	Hill comp feed optics in UV filter in	flexure comp strong
	(under	comp	with	W 6 + .6ND)				IIaO-E				
	/139	2"	4.2	G2	BC	1200/47°	150/1.5	"	B	KK UV	cloud	fine
	0/140	2-3"	3.8	G2	"	"	"	"	A	"		fine
	/140	3"	2.8	G5	"	"	"	"	B	"		fine
	0/140	3"	4.0	G5III + A5	"	"	"	"	A	"		fine very fine
	0/141	"	3.6	"	"	"	"	"	B	"	set 509 T=60°	fine
					"	"	"	"	B		set 509 T=59.5°	O/K
	Nite	KK	Latt	III	ss	Dc		are narrow; slop	around	holes.		

309 wed-Thurs

Date Sept 19-20 /68 Observers T.n. t.somerby

8m 68 Emulsion Batches: D.a.O-E 06103 – 17099

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48613	HD 181 391	19 15.2	−5 36	20 02	21 19	1 38 W	−5 21	fe/−	777
48613T	Spot Calib	for 48613-15			15 min @ 15V	D4 3300	D3 4300	U2 4800	
48614	HD 192713	20 11.2	+23 12	21 23	22 58	2 23 W	+23 32	fe/−	77
48615	HD 11188	01 44.9	+46 58	23 04	00 38	1 33 E	+47 25	fe/−	888
48615F	Focus +05					"	"	"	20-2

Spectr. Temp. +68°F Dome Temp./Hum. 67°/78% Transparency Conditions Fine – sl. hazy

Focus 5.05

Spectr. Temp. 64°F Dome Temp./Hum. 58°/95%

✓ 310

– Cloud by 01h

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
30/300	4"	2.6	GBII	BC	1200/48°	BS	IIaO-E	A	HεK-Ly	broken 1pc smud	fine
							IIIa-E				
30/147	4-5"	6.2	G316 +B9	BC	1200/48°	BS	IIaO-E	B	Fe prog		fine
30/110	2"	7.1	38	"	1200/50°	"	IIIa	A	SB-Ly	T=67F set 505	s/wk
				"	"	"	"	B			Cont vs/blue

311 Thurs-Fri

Date Sept 20-21, 1924 Observers T.M.

8m 60 Emulsion Batches: IIaO-E 06103 - 20094

20172

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48616F	Focus test					0 50W	+4 38	Fel-	
48616	HD 161096	17 38.5	+4 37	18 55	19 09	1 09W	"	Fel-	2-17
48617	HD 181391	19 15.2	−5 36	19 14	21 29	1 54W	−5 24	"	8-88
48617T	Spot Calib	For 48616-20			15 min	15V 3900 D4	D3 4300	DJ 4810	
48618	HD 192713	20 11.2	+23 12	21 33	00 19	3 48W	+23 32	Fel-	79-7
48619	HD 11241	01 45.5	+54 39	00 25	01 15	0 52E	+55 09	"	6-6.5
48620	HD 217675	22 57.3	+41 47	01 21	01 29	2 10W		"	9-9
48620F						0 0	+39 17	"	

Spectr. Temp. 68.5°f Dome Temp./Hum. +63f / 60.% Transparency Conditions . Fine

Focus 505

Spectr. Temp. 53.°f Dome Temp./Hum. +53f / 98.%

312

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				RC	1200/48°	BS	IIIaJ-E	A		cent vs/red	
0/67	3.4"	3.9	K2IV	"	"	"	IIaO-E	A	stylol		fine
0/125	"	26	G8III	"	"	"	"	B	Hsk Cy		fine
							"				
0/180	3.4"	6.2	G3Ib +B9	RC	1200/48°	BS	"	A	Fe proj	T= 65°f set 506	fine
0/140	"	5.4	B2V	"	830/40.2	"	"	B	SB Bkn	T=60°f set 510	flexure Exp 0k
0/74	"	3.6	B6p	"	"	"	"	A	Nar Sp		fine
				"	"	"	IIIaJ-E	B		cent vs/blue	
					Note	2	IIIaJ	focus tests		separated from	
								the IIaOs in		Exp box.	
					→	More	IIaOs	needed - a 7 sky row			
					→	"	IIIaJs	of course needed.			
				There	was one more		4x5 in last	Dark Key, but			
				4x5	flush	jammed	against	baffle.			

313 Fri-Sat

Date Sept 21-22/84 Observers B+-Tn

Emulsion Batches:
IIaO-E 06103-20094
IIaD-E 06103-21094

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48621	HD 161096	17 38.5	+4 37	19 02	19 13	1 17W	+4 37	Fe/-	9-9
48622	HD 189319	19 54.3	+19 13	19 26	19 42	0 31E	+1931	"	9-9
48623	HD 189313	19 28.8	+5 15	19 50	22 44	3 00W	+5 30	"	6-6-6
48623T	Spot Calib for		48621-27		15min @ 15V		D4 3900	D3 4300	D2 42[illegible]
48624	HD 218329	23 02.0	+08 53	23 30	00 42	1 22W	+9 22	Fe/-	6-6-6
48625	HD 10761	01 40.1	+8 39	00 52	01 15	0 42E	+9 08	"	6-6-6
48626	HD 17709	02 45.4	+34 39	01 24	02 13	0 50E	+3504	"	6-6-6
~~48627~~	~~HD 23475~~	~~03 10.4~~	~~+65 13~~	~~02 26~~	~~03 25~~	~~0 35E~~	+	"	6-6-6
48627	HD 23180	03 38.0	+31 58	03 33	03 38	0 18E	+	"	9-9
48628	HD 30652	04 44.5	+6 47	03 45	03 49	1 11E		"	9-9
48629	HD 37160	05 31.5	+9 14	03 56	04 13	1 34E	+9 20	"	9-9
48630	T Spot Calib for 48628-30				15min @ 15V		D4 3900 D3 4300		

Spectr. Temp. ....64°f..... Dome Temp./Hum. 63°f/80% Transparency Conditions Sl. hazy - semi. Cloudy.....

Focus .....609.....

Spectr. Temp. ...57°f..... Dome Temp./Hum 53°f/100% 314

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
60/40	3"	3.9	K3 III	BC	830/400	BS	IIa-O-E	A	stellel		fine
60/42	1-3"	5.0	M0 III	"	"	"	"	B	Archive		fine
60/120	1-3"	7.49	M5+ M5 III	"	"	"	"	A	"	cloud	sl wk
							"				
60/60	1-2"	6.09	M1 IIIab	BC	830/400	BS	"	A	Archive	T-639 Set 5.0	fine
60/50	2"	5.22	G8 III	"	"	"	"	B	"	Some cloud	fine
60/60	1"	6.09	K7 III	"	"	"	"	A	"	some cloud	fine
60/80	1"	6.35	M2 IIab	"	"	"	"	B	———	(? blank?) Yes - discard	
60/50	1"	3.88	B1 III	"	"	"	IIa-O-E ★	A	Archive		fine
60/50	1"	3.64	F6 V	"	"	"	"	B	"		fine
60/30	"	5.04	K0 III	"	"	"	"	A	"	Big	fine Redshift
							"			cloud	
				Note	# 4627 prob blank.					- Do not retain to	
										keep sequence.	
										Done In	

315 Wed - Thurs

Date Sept. 26-27/84 Observers T.a. - C.T.

Emulsion Batches: IIaO-E 06103 - 21094

19 15'

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48630	HD181391	19 15.2	-5 36	19 03	21 38	2 24W	-5 24	Fe/—	8-8-8
48630T	Spot Calc for 48630-			15 min @ 15V		D4 3900			
48631	HD217312	22 54.8	+62 32	21 47	00 58	2 07W	+63 02	Fe/—	8-8-8
48632	HD1337	00 12.4	+50 53	01 10	02 15	2 04W	+51 24	"	8-8-8
48633	HD11291	01 43.5	+54 39	02 22	03 27	1 43W	+55 07	"	9-9
48634	HD 12929	02 01.5	+22 59	03 31	03 45	1 47W	+23 24	"	9-9
48634F	Focus test					"	"	"	240-15

Spectr. Temp. 55°f Dome Temp./Hum +47°f/60% Transparency Conditions Some cloud

Focus 509

Spectr. Temp. 44 Dome Temp./Hum +37°f/100%

316

Comparson Filter	Exp.	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		40/230	5'	=6	G8III	BC	1200/48Å	BS	IIaO-E	B	HsK-Ly		fine
									IIaO-E				
		50/220	4-5"	7.2	B0 IV / A0 III	BC	1200/50.7	BS	IIaO-E	A	SB Ly	T=52°f	Fe str wk str wk
		30/70	3-4	6.1	O9III	"	"	"	"	B	"	T=45°f Set 511	fine
		20/70	"	5.34	B.7V	"	830/40.2	"	"	A	Sb-Bln	T=44°f Set 506 *	* Flexure? fine
		20/63	"	2.2	A2III	"	"	"	"	B	std vel	* Exp *	Flexure? Sl str
						"	"	"	IIIaJ	A	Set 506 *	T=44°f	cont blue

* Focus was set wrong
So called Flexure is result of bad focus.
Focus should be 516, not 506

317 Tues. Wed

OCT 1-2/84
PRIMARY RECOATED

Date Oct 2-31 84 Observers B.t.-T.t.

Emulsion Batches:
5m 68° IIIaJ-E 31083-21094
8m 68° IIaD-E 06103-21094

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Exp.
48635	HD 161096	17 38.5	+4 37	18 44	18 57	1 45W	+4 37	Fe/-	17-17
48635F	Focus test					"	"	"	50-50
48636	HD 161096	17 38.5	+4 37	19 10	19 27	2 15W	"	"	22-22
48636F	Focus test					"	"	"	50-50
48637	HD 137909	15 23.7	+29 27	19 35	20 09	5 11W	+29 11	"	22-22
48637T	Spot Calib	for 48635-39			15 min @	D4 17.5V 3900	15V 4300	15V 4300	
48638	HD 164852	17 58.1	+20 50	20 15	21 33	4 02W	+2052	Fe/-	12-12
48639	HD 209790	22 00.9	+64 08	21 51	22 12	0 38W	+6437	"	12-12
48640	HD 217312	22 54.8	+62 32	22 16	00 29	2 02W	+6301	"	7-7-7
48640T	Spot Calib	for 48640-41,	(next night's IIaDs)		15 min @	15V	D4 3900	D3 4300	D2 4800
48641	HD 19058	02 58.8	+38 27	00 34	00 45	2 19E	+	Fe/-	7-7

Spectr. Temp. ..+565°f.... Dome Temp./Hum. +54°f/65% Transparency Conditions . thin cloud ... at times .....

Focus ..... 514 -> 508 .....

Spectr. Temp. ..+53°f..... Dome Temp./Hum +..... /90%

318

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/35	1"	3.9	K2 III	BC	830/402	BS	IIIaJ-E	A	stdvel	Set 514	fine
				"	"	"	IIIaJ	A		Fe arc gap adjusted by	Red
20/112	1"	3.9	K2 III	"	1200/507	"	IIIaJ-E	A	stdvel	Set 508	fine
				"	"	"	IIIaJ	A			OK to go?
0/134	2"	3.93	F0p	EC	"	"	IIIaJ-E	B	Asm Sp		fine
							IIaJ-E				
9/140	2"	5.19	B3 V	BC	1200/507	BS	IIIaJ-E	A	SL Bln	thin cloud T=55°f	Fav stuk fine
0/134	1-½"	4.63	A3m	"	"	"	"	B	Asm Sp		Fav stuk fine
0/230	2"	7.2	B0 V	"	"	"	IIaO-E	A	SL Ly	cloud	stuk
							IIaO-E				
0/40	2"	5.04	M4 II-III	BC	1200/507	BS	IIIaJ-E	B	Py prog	thick cloud	stuk

319

Date Oct. 3/4 Observers DH-TM

Emulsion Batches:
8"68 Ila O-E 06103 - 21094
with previous night

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48642	HD219215	23 9.1	-6 35	19 14	20 59	1 41 E	-	Fe/-	8-8-8
48643	HD6903	1 4.5	+19 7	21 05	22 34	2 00 E	+19 39	Fe/-	8-8-8
48643F	Focus test					0 0	-10°	"	30-0

Spectr. Temp. ~~52°f~~ ..... Dome Temp./Hum. 50°f / 60% Transparency Conditions . Some cloud & gusty ....

Focus ..... 508 .....

Spectr. Temp. ..53.5°f..... Dome Temp./Hum. ~~49~~ / 63% much cloud to 5th EST

5 Rain 320

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/104	4"	5.78	[illegible]	RC	1200/5077	35	IIaO-E	A	Archive		fine
20/100	4"	6.24	GOIII	"	"	"	"	B	"	Sc+509 T=55°f	fine
				"	"	"	"	A		" T=53.5°f	ok? too gain!

321 Thurs-Fri

Date Oct. 11-12, 84 Observers KK - Ri - Ta Ha too

Emulsion Batches:

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	~~Declination~~ Flat Fld	Comparison Type/Filter	Exp.
		1980	1980						
	Gamma Cyg	20 21.5	+40 11	19 34 50	19 42 15	0 32 W	60 sec OK Flat Fld	FeNe/—	1 sec
	"	"	"	19 55 10	00 00 20	W	60 sec Flat 300 sec OK	"	1 sec
	"	"	"	20 19 47	20 24 31		15 secs - 3 secs OK	FeNe Wr 66+ND1.6	1 sec
	"	"	"	20 33 28	20 37 37				
	"	"	"	20 39 31	20 44 01		3 sec 3 sec Clear	FeNe Wr 66+ND1.0	1 sec
	"	"	"	21 03 16	21 14 48		6 sec Clear	FeNe Wr 66+ND1.0	1 sec
	DARK			21:21	21 37				
	Focus test			comp -> stellar				FeNe Wr [illegible]	

Spectr. Temp. ..... Dome Temp./Hum. +55°/96% Transparency Conditions hazy - foggy .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 50°F/100% 322 <spec - FP>

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/200 Hβ filter		2.22	F8 I$_b$	RC	1800/56°	250µ	Reticon		Tests	Temp -123.5°C	5969
20/100 Eye filter					1800/40°	"	"		"	-123.4	1121
50/300 Velvia (above slit)					600/335	"	"		"	-123.2	4066
1/2					"	"	"		"	-123.2	3867
30/300					"	"	"		"	-123.0	3639
20/500					"	"	"		"	-122.8 for Saturn	3483
					"	"	"		"	-122.8	
				"	"	"	"			-122.7	

323

Date Oct. 16-17 Tues-Wed Observers B.t.-T.y.

5m 680 Emulsion Batches: IIIa-J-E 31083-31094
8m 680 IIaO-E 06103-02104

22 18-1

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Ex
48644	HD 164852	17 58.1	+20 50	18 32	19 35	2 58 W	+20 54	Fe/—	13-
48644T	Spot Calib For	48644 -45, x49		15min@	04 17.5V 3900	15V 4300	15V 4810		
48645	HD 209790	22 00.9	+64 08	19 43	20 16	0 22 E	+64 37	Fe/—	13-13-
48646	HD 206936	21 40.4	+58 19	20 22	21 27	1 9 W	+58 48	Fe/—	7-7-
48646T	Spot Calib For	48646 -48, 50-53.			15min@ 15V	D4 3900	D3 4300	D2 4810	
48647	HD 19058	02 58.8	+38 27	21 33	22 03	3 35 E	+ —	Fe/—	7-8-
48648	HD 1337	00 12.4	+50 53	22 11	22 45	0 6 E	+51 24	"	8-8-
48649	HD 3144	3 26.2	+47 36	22 52	23 19	0 48 E	+47 56	"	13-13-
48649 50	HD 21699	3 25.1	+47 41	23 21	00 04	2 00 E	+48 01	"	13-
48650 51	HD 36485	5 26.9	-0 22	0 0 17	0 03	0 02 E	-0 13	"	6-6-
48651	HD 37017	5 30.4	-4 34	0 7 09	0 3 27	0 41 E	-4 47	"	6-6-
48652	HD 37776	5 35.9	-1 32	0 3 39	0 5 25	1 11 W	-1 27	"	6-6-
48653	HD 66141	7 57.1	+2 36	0 5 29	0 5 56	0 35 E	+2 26	"	6-6-
48653F	Focus test					"	"	"	4

Spectr. Temp. ...56°f..... Dome Temp./Hum. +58°f/62% Transparency Conditions . Fine.....some cloud at beginning

Focus .....509.....

Spectr. Temp. ..65°f..... Dome Temp./Hum. +52°f/98%

324

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/140	2"	5.19	B3IV	BC	1200/507	BS	IIIaJ-E	A	SL-Blg		fawk slwk
							IIIaJ-E				
3/145	2"	4.63	A3m	BC	1200/507	BS	"	P	AsmSp		fawk v slwk
20/70	"	6.93	Majac	"	"	"	IIaO-E	A	Archie	broken (1" missing)	fawk vslwk fine
							"				
20/20	3"	5.04	M4 II-III	BC	1200/507	BS	IIaO-E	B	Bg Prog	T=57°f	fine
20/70	4Z	6.1	G9III	"	"	"	"	A	Lg prog		fine
20/20	2"	6.97	F0	"	"	"	IIIaJ-E	B	wrong set: cut/short		v wk
20/136	2"	5.36	[illegible]	"	"	"	"	A	He Blg		fine
200/500	4"	6.7	B2V	"	830/402	"	IIaO-E	B	He Blg	T=57° Se+511	fine
~~40/120~~	~~2-3~~	~~6.43~~	~~B2V~~	"	"	"	"	A	"	~~2nd set~~	~~last~~
40/100	3-4"	6.83	B2V	"	"	"	"	B	"		fine
40/72	4-5"	5.5	K2III	"	"	"	"	A	slave/		fine
				"	"	"	IIIaJ-E	B		Se+511 T=55°f cont sl blue	

325 Retrocon Night 3

Date Oct 18-19/24 Thurs-Fri Observers KK-Ta-Raj — Shenton

Emulsion Batches:
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.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	Focus test						wr66+1.0ND	FeNe	5-5
	" "						"	FeNe	5-5
	" "						"	"	"
							"	"	"
							"	"	"
	χ Cyg	1980 20 21.5	1980 +40 11	19 24	19 37	W	Flat Fld 60 sec klar	FeNe/5	3 sec
	"	"	"	19 42 40	19 59 43		"	"	3 sec
	"	"	"	20 18	20 25 53		Flat Fld 60 sec klar	FeNe/5	2 sec
	"	"	"	20 33 12	20 45 00		"	FeNe/5	2 sec
	66 Cyg	21 17.2	1992 +39 49	21 08 15	21 23 35		"	FeNe/5	2 sec

Spectr. Temp. ..... Dome Temp./Hum. 56°F/61% → rapidly rising Transparency Conditions ... Fine .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 50°F/78% 326

Comparison/Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Last. Exp. meter filter	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	Stellar	→	Comp			1800/54°	25μ	−.38		Reticon	T=121°C	
	Comp	→	Stellar					+.30			5° clockwise	
	"		"					+.53		wrong area	another 10° clockwise	
	"		"					+.19			Then 40° ccw	
	"		"					+.01	good		Now to 30° ccw	
	30/200 Hα	2"	2.72	F8 5	Hα	1800/56°		for Hα			Trailed −120.7	
	100 Hα Blue	"	"	"	Hα	1800/56		for Hα			no trailing	
	90/100	"	"	"	Blue	1800/45		for HB → not to HB off to Blue end				
	90/125	"	"	"	"	1800/45°		HB			−120.4°C	
	90/150	1-2"	4.3	F2	"	"		"			−120.3°C fine	

327

Oct 23 R: 8min @ 68°F

Date Oct. 22-23. Nights Observers ST. TM

Emulsion Batches:
IIaO-E ..0.6103 – .0.7104 22 193
* IIaO-E ..0.6103 – .1.6104 21 190

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48654	HD 1337	00 12.4	+50 53	23 04	00 24	2 09 W	+51 24	Fe/—	8-2
48654T ✓	Spot Calib for 48654-58			15min @ 15V		D4 3900	D3 4300	D2 4810	
48655	HD 19058	02 58.8	+38 27	00 39	01 24	0 10W	+38 52	Fe/-	8 8
48656	HD 1337	00 12.4	+50 53	01 28	02 33	4 07W	+51 26	"	8 8
48657	HD 12929	02 01.5	+32 59	02 39	02 48	2 31W	+32 26	"	12-1
48658	HD 27022	04 11.3	+64 54	02 57	04 10	1 42W	+65 08	"	8 8
48659	HD 70272	08 15.9	+43 31	04 14	05 20	1 12E	+43 16	"	8-8
48659T ✓	Spot Calib for 48659-60.			15min @ 15V		D4 3900	D3 4300	D2 4810	
48660	HD 69267	08 11.1	+ 9 30	05 24	05 58	0 26E	+ 9 17	Fe/-	8-8
48660F	Focus					"	"	"	

Spectr. Temp. 53° ..... Dome Temp./Hum. 47°/90% Transparency Conditions . Trans. Cloudy .....

Focus . 509 .....

Spectr. Temp. 49°f ..... Dome Temp./Hum. 42°/93% only Mon on Clear

328

Comparison/Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
	70/70	3-4"	6.1	O9 III	BC	1200/507	BS	IIaO-E	A	Ly Prog	cloud's end	vvsluk
								IIaO-E				
	70/80	2"-3"	5.04	M4 I-II	BC	1200/307	BS	IIaO-E	B	Ly Prog		Fine
	70/170	3-4"	6.1	O9 III	"	"	"	"	A	Ly Prog	cloud	Fine
	70/70	3'	2.2	K2 III	"	"	"	"	B	sil/bel		Fine
	70/150	3"	6.08	G5 IIb	"	1200/307	"	"	A	Archive	bad - Prob emulsion reversal	Focus
	70/80	3"	5.80	K4.5 III-IIIb	"	"	"	*IIaO-E	B	"	T = 51°f	Fine
								*IIaO-E				
	70/83	3"	5.00	K4 III + B0.5	BC	1200/507	BS	"	A	Archive	Suspect lost Focus	Fine
								IIIaJ	B	set 509	49°f	Light On.
											Suspect because of hardware mgt problems.	

329

Date Oct. 23-24 Tues. Wed Observers B.t.-Tn

09 4Ri 8m. @ 68°F

Emulsion Batches: IIaO-E 06103—16104 20 192

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
48661	HD 190588	02 58.8	+38 27	23 27	00 14	0 56E	+38 49	Fel-	8-8-8
48661T	Spot Calib for 48661-62.			15min @ 15V	D4 3900	D3 4300	D2 4810		
48662	HD 1337	00 12.4	+50 53	00 19	01 15	2 52W	+51 23	Fel-	8-8-
48663	HD 11241	01 45.5	+54 39	01 19	02 24	2 27W	+55 08	"	6-6-
48664	HD 27022	04 11.3	+64 54	02 28	03 03	0 44W	+65 11	"	6-6-

Spectr. Temp. 52°f Dome Temp./Hum. 42°F / 60% Transparency Conditions ... cloud ... again ...
Focus 508
Spectr. Temp. 46°f Dome Temp./Hum. 40°F / 60%
thin cir. etc
mostly clear in NW sky
330

Comp. / Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
1- 8-6	20/89	2-3"	5.04	M4 II-III	BC	1200/30.7	BS	IIa O-E	A	Pg Prog	cloud	fine
								IIIa O-E				
1- 8-6	20/85	2"	6.1	O9 III	BC	1200/30.7	BS	"	B	Ly Prog	some cloud	fine
6-2	20/100	2-3"	5.34	B2 V	"	830/40.2	"	"	A	SB Ly	some cloud T-47 Set 514	Fine
4-2	20/37	"	6.08	G5 IV	"	"	"	"	B	Ha line	some cloud - Lots now	fine

331 wed-Thurs

Date Oct. 24-25/84 Observers BT-TM

Emulsion Batches: 19172

ROSS 8 IMAGE F ..Hal-E..06103..-2310
Red 4 Em. 669 ..Hal-E..31083..-01104

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48665F	Focus test					0 10W	+30		
48665	HD 186791	19 41.5	+10 22	18 14	18 24	0 35 W	+10 36	"	9-9
48666	HD 164852	17 58.1	+20 50	18 31	20 02	3 59 W	+20 54	"	13-20-13
48667	HD 209790	22 00.9	+64 08	22 08	20 40	0 42 W	+64 35	"	16-16-16
48667T	Spot Calib for 48666-67, 70-72			15 min @ D4		17.5V D4 3700	15V 4300	15V 4810	
48668	HD 217312	22 54.8	+62 32	20 53	23 46	2 45 W	+63 01		8-8
48668T	Spot Calib for 48665, 48668, 69, 73-75.				15 min @	D4 17V 3900	D3 4300	D2 4810	
48669	HD 19058	02 58.8	+38 27	23 [illegible]	00 15	0 52E	+38 48		8-8-8
48670	HD 21699	03 25.1	+47 41	00 21	01 54	0 19W	+47 59		16-16-16
48671	HD 11241	01 15.5	+54 39	01 58	03 02	3 07W	+55 07	"	13-13-13
48672	HD 47539	06 35.5	+19 59	03 07	03 33	1 09E	+19 59	"	13-13-13
48673	HD 77912	09 02	+35 51	03 36	04 12	2 56E	+38 35	"	9-6-6
48674	HD 52210	09 25.6	+70 16	04 18	04 43	2 53E	+69 59	"	9-9
48675	HD 90537	10 22.1	+37 13	04 48	05 29	3 00E	+36 51	"	6-6-6
48675F	Focus	test				"	"	"	

Spectr. Temp. 51.5°f Dome Temp./Hum. 48°f / 50% Transparency Conditions Mostly clear

Focus 514 Many slow, long lasting motions from all directions.

Spectr. Temp. 42°f Dome Temp./Hum. 37°f / 94%

Comparison Filter	Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
					BC	830/402	BS	IIaO	A		*note (Hartmann Mask Obtained) Centered	
	/52	2"	4.1	K3II	"	"	"	IIaOE	A	stive/		fe sl str f.c
	/188	3"	5.19	B3V	"	1200/50.7	"	IIIaJ-E	B	SI Bln	Set 509	fine
	/142	3"	4.63	A3m	"	"	"	"	A	A3m Sp-Rk	50°f	fin c
								"		Rich Rk watch narrow (H) strips in Xpsn		
	/200	3-5	7.2	B0IV + K5-7	EC	1200/50.7	BS	IIaO-E	B	Cy prog		sl wk
								IIaOE				
	/84	2"	5.14	M4 ± 2	BC	1200/50.7	BS	"	A	Cy prog	+47°f	fine
	/185	2"	5.36	B8IIIp	"	"	"	IIIaJ-E	B	He rich	Set 510 T-47°f	fe str vsl wk
	/210	2"	5.34	B2V	"	830/402	"	"	A	SB-Bln	Set 515 T 43°f	fine
	/151	2-3	4.41	O7Ve	"	"	"	"	B	Archive		fine fe str
	/60	"	5.6	G7Ib-II	"	"	"	IIaO-E	A	Archive		fine
	/61	"	5.31	G4III-IV	"	"	"	"	B	Archive		Fine
	/60	2	5.11	G9IIIa6	"	"	"	"	A	Archive	Cloud band	Fine
					"	"	"	IIaO	B	Set 515 T-42°f		

333 Mon - Tues

Date Oct 27-28/84 Observers BT - TM

8m 68s Emulsion Batches: IIaO-F 06103 - 23103 IIIaJ-E 31083 - 01104

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48676	F Focus test					0 0		Fe/-	5-5
48676	HD 186791	19 41.5	+10 22	17 53	18 12	0 42W	+10 36	Fe/-	4-4-12
48677	HD 164852	17 58.1	+20 50	18 14	19 40	3 55W	+20 53	Fe/-	12-15 0
48678	HD 217312	22 54.6	+62 32	19 44	23 03	2 21W	+63 01	Fe/-	8-7-8
48678T	Spot Calib	for 48677,80			15 min @ 04	17.5V 3900	15V 4300	15V 4600	
48679	HD 11158	01 44.9	+46 58	23 08	01 13	1 39W	+47 13	Fe/-	8-8-8
48679T	Spot Calib for	48676,78	-79,81-85		15 min @ 15V	3900	D4 D3 4300	D2 4800	
48680	HD 21699	03 25.1	+47 41	01 15	02 14	1 00W	+48 02	Fe/-	4-4-6
48681	HD 19058	02 58.8	+38 27	02 17	02 39	1 53W	+38 48	"	10-10
48681	F Focus test					2 00W	"	"	25-25
48682	HD 37479	05 33.7	-2 39	02 49	03 45	0 24W	-2 35	"	6-6-6
48683	HD 36485	05 26.9	-0 22	03 49	04 44	1 31W	-0 14	"	6-6-6
48684	HD 37776	05 35.9	-1 32	04 45	06 01	2 34W	-1 29	"	6-6-6
48685	HD 102570	11 45.5	+2 20	06 05	06 14	4 45E	+1 37	"	9-9

Spectr. Temp. ....53.5°f.... Dome Temp./Hum. +46f/72% Transparency Conditions Fine.....

Focus 508-09-515

Spectr. Temp. ....43°f..... Dome Temp./Hum. +38f/90%

334

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	1200/507	BS	IIaO	A		right on	
0/72	3"	4.1	K3II	"	"	BS	IIaO-E	A	std vel		fine
0/190	3"	5.19	B3V	"	"	"	IIIaJ-E	B	std Bin		
0/301	4-7"	7.2	B0V	"	"	"	IIaJ-E	A	Ly proj		fine
							IIIaJ-E				
0/152	2"	7.1	G8	BC	1200/507	BS	IIaO-E	B	Ly proj	Set 509 T = 47°f	fine
							IIaJ-E				
0/200	2"	5.36	B2V	BC	1200/507	BS	IIIaJ-E	A	He rich		
0/83	2"	5.09	M4II-III	"	"	"	IIaO-E	B	Pg proj	T = 44°f	s/str
				"	"	"	"	A	set 509	T = 44°f (gap adjusted in advance)	right on Fe 5015 fine
0/62	1"-2"	6.72	B3V	"	830/402	"	"	A	He rich	Set 511 T = 44°f	fine
0/125	"	6.70	B3V	"	"	"	"	B	"		f-c
0/123	"	6.65	B3V	"	"	"	"	A	"		f-c
0/56	4"	4.16	F0V	"	"	"	"	B	Archive		f-c str s/str

Note - Press fld tests in for this night.

335

Date 12.30.31/84. Observers KT:Tm

Emulsion Batches: IIaO-E 19103 – 29104

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48686	HD 8590A	1 22.6	88 46	19 54	20 03	4 09 E	—	Fol-	11-11
48685F	Focus +3+					4 00 E	+47°	Fol-	20-20
48686T	Spot Calib for 48686-89				15 min @ 15V	D4 3900	D3 4300	Fol- 4810	
	2nd Installment								
48687	HD 19058	02 588	+36 27	02 30	02 58	2 15 W	+38 48	Fol-	6-12-6
48688	HD 66751	7 59.9	+70 00	03 02	05 34	0 27 E	+69 48	"	8-8-8
48689	HD 74395	8 385	-06 52	05 31	06 21	0 01 W	-07 09	"	8-8-8

Spectr. Temp. 53°F Dome Temp./Hum. 56°F/80% Transparency Conditions Cloudy soon

Focus 509

Spectr. Temp. 44°F Dome Temp./Hum. 37°F/82%

336

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/65	2"	2	F	BC	1200/5027	BS	IIaO-E	A	Asn Sp		fine
				〃	〃	〃	〃	A		Center slit	
							IIaO-E				
					Note-		Brass Comp	Fld Lens	removed after		
							this night's	work.			
							It was	probably in	for last night.		
60/75	3"-5"	5.04	MA II-E	BC	1200/5027	BS	IIaO-E	A	Pg pray	Brass lens out now	fine
80/160	4"-2"	2.27	f/F8	〃	〃	〃	IIaO E	B	Asn Sp		fine
80/70	〃	5.46	G.Ib	〃	〃	〃	〃	A	Archive	Set 510 T=45°F	fine
			KK	Only	6	IIaO	strips	in	Pane		

337

Date Oct. 31 – Nov. 1/84 Wed – Thurs. Observers R. – F.M.

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	Pattern Testing								
	HD 3712	0h 34m 8	+55° 59'	22:05	22:07			Fe Ne/5	5s
	" "	"	"	22:10	22:13			Fe Ne/5	5s
	" "	"	"	22:16	22:23			Fe Ne/5	5s
	" "	"	"	22:35	22:39			Fe Ne/5	5s
	" "	"	"	22:43	22:52			Fe Ne/5	5s
	" "	"	"	22:57	23:03			Fe Ne/5	5s
	" "	"	"	23:07	23:12	1h 05m W		Fe Ne/5	5s
	" "	"	"	23:21	23:27			Fe Ne/5	5s
	Cloud – aircraft								
	HD 24760	3h 5m.1	+39° 43'	03:39	03:48			Fe Ne/5	1s
	"	"	"	04:00	04:13			Fe Ne/5	1s
	"	"	"	04:20	04:28			Fe Ne/5	10s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions . Cloudy...with...thin...clouds... patches.

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 44°F/98.7% Second spent very hazy

338

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
70/150		2.5	KO III	BC	600/34.5	250μ	RETICON			λ_c = 9084 Å	
20/150		"	"	"	600/35.5	"	"			λ_c = 9533 Å	
00/97		"	"	"	600/36.5	"	"			10,059 Å = λ_c	
20/100		"	"	"	600/37.5	"	"			λ_c = 10592 Å	
20/150		"	"	"	600/38.0	"	"			λ_c = 10843 Å	
70/100		"	"	"	600/35.5	"	"			λ_c = 9535 Å	
/100		"	"	"	600/34.5	"	"			λ_c = 9084 Å	
/42		"	"	"	600/33.5	"	"			λ_c = 8473 Å	
50/150		2.31	IV-V	BC	1800/57	25μ	"		E Per/Fin		
50/200		"	"	"	" "	"	"		"		
50/200		"	"	"	1800/43.5	"	"		"	Window fogged!	

339

Date 1984 Nov 2/3 Fri/Sat Observers KK-Ri-Fln

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp	Exp Mtr.
	61 Cyg A	21 02.4	+38 15	19:40	20:35			AcNc W#66		
	HD 1326	0 12.7	+43 27	21:47	22:30	00h46W		FeNe W#66	1 sec	
	HD 24760	3h 51.1m	+3° 43'	0:27	01:01	00h 22m E		FeNe/-	5 sec	
	"	"	"	1:11	01:29			"		
	"	"	"	01.32	01:46	00h05W				
	"	"	"	01.48	02:03	00h40W		FeNe/-	5 sec	
	"	"	"	02:07	02:22	00h59W				
	"	"	"	02:23	02:34	01h11W		Fe/Ne	5 sec	
	"	"	"	02:38	02:50					
	"	"	"	02:51	03:01	01h38W		FeNe/-	8 sec	
	"	"	"	03.05	03:12	01h49W				
	"	"	"	03:13	03:20		+40°02			
	"	"	"	03:23	03:30	00h09W				
	"	"	"	03:32	03 39			Fe/NE	25 sec	
	FLAT FIELD	10 MIN		03:45	04:00					

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

340

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/103	4"	5.6V	K5V	~~BC~~ RETICON	600/33	250μ	RETICON		Asm. Sp/KK		
30/20 B FILTER	4"	8.1V	M1V	BC	600/33	250μ	Reticon		Asm Sp/KK		
20/400		2.7i	B0.7 I	BC	1800/43.5	250μ	Reticon		ε Per/Flw	TOPPER 2N2 Cloud	
20/400		"	"	"	"	"	"		"		
20/400		"	"	"	"	"	"		"	SYSTEM WENT DOWN READ FRAMING ERROR & NTEST2.SV43	
20/400		"	"	"	"	"	"	"	"		
20/400		"	"	"	"	"	"	"	"		
20/300		"	"	"	"	"	"	"	"		
20/300		"	"	"	"	"	"	"	"		
20/300		"	"	"	"	"	"	"	"		
20/200		"	"	"	"	"	"	"	"		
20/200		"	"	"	"	"	"	"	"	THE SYSTEM WENT DOWN SAME ERROR	
20/200		"	"	"	"	"	"	"	"		
20/200		"	"	"	"	"	"	"	"		
		"	"	"	"	"	"	"	"		

341

Emulsion Batches:

Date ..... Observers .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	HD 24760	3 51.5	+39 53	04:16	04:21	02 59W			
	"	"	"	04:22	04:36				
	"	"	"	04:37	04:52	03:29W			
	"	"	"	04:53	05:07			Fe NE/	1s
	HD 62647	07 40.0	+37 46	05:20	05:43	00h32W	+37°34		
	"	"	"	05:44	06:20	01h08W	"	Fe Ne/	1s

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. 27°F / 65% 342

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/200		2.71	B0.7III	B.C	1200/43	200	RETICON		EPER/FIN	YELLOW FILTER OVER EAR	
20/400		"	"	"	"	"	"		"		
20/400		"	"	"	"	"	"		"		
20/400		"	"	"	"	"	"		"		
20/200		V=5.18 M2III B			1200/49	"	"				
20/325		"	"	"	"	"	"		"		

343 SAT SUN

Date Nov. 3-4 1984 Observers Ri - Fl

Emulsion Batches:
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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD 213310	22 25.4	+47 12	21:05	21:23	01h30w	+47 42	I	1s
	"	"	"	21:24	21:48	01h55w	"		
	COMPARISON							Fe/WRW66	1s
	FLAT FIELD	15 SEC							
	HD 1326	0 12.7	+43 27	22:27	00:28	02h47w	+44 00	FeNe/WRW6	1 SEC
	FLAT FIELD	5 SEC							
	HD 24760	03 51.1	+39 43	01:12	01:13				
	"	"	"	01:22	01:23				
	"	"	"	01:25	01:28				
	"	"	"	01:29	01:34				
	"	"	"	01:35	01:43	00h35w	+40 00		
	"	"	"	01:45	01:56	00h36w	"	FeNe, WRW6	F 1SEC
	"	"	"	02:02	02:16	00h56w	"	FLAT FIELD	
	"	"	"	02:17	02:33	01h14w			
	"	"	"	03:07	03:29	02h10w		FeNe WRW6	1 SEC
	FLAT FIELD	40 SEC	+ 60 SEC						

Spectr. Temp. ..... Dome Temp./Hum. 40°F 68% Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/400	2-3	4.32	MOTOR +8	B.C.	1200/50.5	YELLOW FILTER 250	RoticoN			TOPPED LN2 19:45	
30/600		"	"	"	"	"	"				
					"	"	"				
					"	"	"				
HeFILTER 30/400		V.8.07	M2V	B.C.	600/33.5	250	"		ASM Sp/HH	T=+1230F	
					"	"	"				
2/10	2	2.71	B0.7III	IBC	1200/4380	250	"		C PER/FLN	TOPPED DEWAR T=-122.8	
2/10		"	"	"	1200/42.5	250	"		"	YELLOW FILTER OVER SLIT	
2/20		"	"		"	"	"		"		
2/40		"	"		"	"	"		"		
2/60		"	"	"	"	"			"		
2/80		"	"	"	"	"	"	"	"		
2/100		"	"	"	"	"	"	"	—		
2/120		"	"	"	"	"	"	"	"		
2/140		"	"	"	"	"	"	"	"		

345

Date NOV 4/84 Observers RI

Emulsion Batches: .....

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Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	HD42397	6 10.6 (1984)	+2501	03:54	04:20		+2504	FENE WR66	3s
	FLAT FIELD	5 SEC	10 SEC	60 SEC		90 sec			

Spectr. Temp. ..... Dome Temp./Hum. ..... Transparency Conditions .....

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. .....

346

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
4 FILTER 200/54		V 8.03	GO IV	B.C.	1200/42.5	250	RETICON		STD VEL	CLOUDS -122.7°C CLOUDED IN	

347

Date Nov. 5-6, 64 Observers Ek-Ri

Emulsion Batches:
IIaO-E 19103-29104

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48690	HD 216228	22 46.1	+65° 40	18 02	18 07	1 59 E	+66 08	Fe/-	12-2
48691	HD 193092	20 13 4	+40 03	18 17	19 54	2 22 W	+40 22	"	6-6-6
48692 ✓	HD 190586	2 58.8	+38 27	20 02	20 58	4 39 E	+38 48	"	6-18
48692T	Spot Calib for 48690-92				15 mm	K V 390 Dw	D3 4300	D2 480	
48692F	Focus Test							Fe/	20-2

Spectr. Temp. 52°f ..... Dome Temp./Hum. 45°f/73% Transparency Conditions . clouds in west .....

Focus . . 508 .....

Spectr. Temp. 49°f ..... Dome Temp./Hum. 41°f/84% 348

Comparison Filter	Exp.	Exp. Mtr. B filter	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
		20/73	2-3"	4.37	K0III	BC	1200/30°	B5	IIaO-E	A	Archive	wrong gain	fe s/str s/wk
6-6-6		30/280	"	6.89	K3sIIab -IIb	"	"	"	"	B	Archive		fine
6-6-6		20/38	3"	5.04	M4IIab	"	"	"	"	A	Py Prog	cloud ended exp.	fine
									"				
						"	"	"	"	B		T = 49°f	center Bin

349

Date Nov. 6-7 1984 Tues-Wed Observers F.L. – R.I. 5" 68°

Emulsion Batches:
IIaJ 6 31083-0114
IIIaJ* 6 31083-0214

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48693	HD 24912	3h 52m.5	+35° 30'	20:47	21:21	3° 47' E	+35° 48'	Fe/–	16-16-16
48694	" "	"	"	21:25	21:49	3h 2° E	"	Fe/–	16-16-16
48695	" "	"	"	21:[illegible]	22:13	2° 56' E	"	Fe/–	[illegible]
48696	" "	"	"	22:16	22:48	2h 22m E		Fe/–	16-[illegible]
48697	" "	"	"	22:51	23:22	1h 46m E	"	Fe/–	[illegible]
48697T	SPOT CALIB FOR PLATES 48693-98			15 MIN @ D4		① 17.5V 3900	② 15V 4300	③ 15V 4816	
48698	HD 24912	3h 52m.5	+35° 30'	23:27	23:53	1h 16m E	+35° 48'	Fe/–	16-16-16
48699	" "	"	"	23:56	00:21	0h 48m E	"	Fe/–	16-16-16
48700	" "	"	"	00:23	00:52	0h 17m E	"	Fe/–	16-16-16
48701	" "	"	"	00:55	1:18	0h 09m W	"	Fe/–	16-16-16
48701F	Focus Test							Fe/–	25-25
48701T	Spot calibration for plates 48699-[illegible]				15 min @ D4	① 17.5V 3900	② 15V 4300	③ 15V 4810	
	Closed – 2:30 completely overcast								

Spectr. Temp. 43°F ..... Dome Temp./Hum. 37°F/74% Transparency Conditions .....

Focus 510 .....

Spectr. Temp. 35°F ..... Dome Temp./Hum. 30°F/86%

350

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
15° FILTER											
20/151		4.05	075 II	BC	1200/5337	BS	IIIaJ-e	A	OCTAR/Fin	3 Par.	fine
9/60		"	"	"	" / "	"	"	B	" / "	V	s/wk
8/60		"	"	"	" / "	"	"	A	" / "	V	s/wk
20/151		"	"	"	" / "	"	"	B	" / "		Fine
2_/151		"	"	"	" / "	"	"	A	" / "	some cloud T=40°F; F=510.5	Fine
							"				
20/150		.05	.15 I	BC	12_/53.7	BS	"	B	OCTAR/Fin		fine
20/150		"	"	"	" / "	"	IIIaJ*-e	A	" / "	T=39°F	fine
20/150		"	"	"	" / "	"	"	B	" / "		fine
20/151		"	"	"	" / "	"	"	A	" / "	T=38°F; F=511.	fine
				"	" / "	"	IIaJ	B		T=35°F; F=511	cirrus
							IIIaJ*-e				
				KK: Both calibrations in some							
				NEED	MORE	THAN					

351

Date Nov. 7-8 1984 Wed - Thurs Observers Fln.-Tnr

8m Emulsion Batches: IIaO-E 19103 -05114

5m IIaO-E 31083 -02114

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
48702	HD 217312	22h 54.9m	+63° 32'	18:02	20 45	0h 38m W	+63° 02'	Fe/—	8-8-8
48702T ✓	Spot Calib for 48702,12			15min @ 15V	D4 3900	D3 4300	D2 4810		
48703	HD 24912	3h 52.5m	+35° 30'	20:52	21 08	3h 58m E	+35° 47'	Fe/—	16-16-16
48704	" "	"	"	21:10	21:24	3h 43m E	"	Fe/—	16-16-16
48705	" "	"	"	21:26	21:42	3h 25m E	"	Fe/—	22-22
48706	" "	"	"	21:48	22:03	3h 04m E	"	Fe/—	22-22
48707	" "	"	"	22:04	22:19	2h 48m E	"	Fe/—	22-22
48708	" "	"	"	22:21	22:34	2h 33m E	"	Fe/—	22-22
48709	" "	"	"	22:38	22:51	2h 16m E	"	Fe/—	22-22
48704T ✓	Spot Calib for 48703-11			15min @ 17.5V D4 3900	15V 4300	15V 4810			
48710	HD 24912	3h 52.5m	+35° 36'	22:52	23:15	1 52E	+35° 47'	Fe/—	22-22
48710F	Focus test					0 05E	+21 30	"	50
48711	HD 24912	3h 52.3m	+35° 30'	23:05	00 24	0h 41m E	+35° 47'	Fe/—	22-22
48712	HD 19058	2h 58.5m	+36° 27'	23:34	01 03	0h 53m W	+37° 50'	Fe/—	8-8-8

Spectr. Temp. 42°F ..... Dome Temp./Hum. 39°F / 73% Transparency Conditions Cirrus at first .....

Focus ... 5.11 .....

Spectr. Temp. 40°F ..... Dome Temp./Hum. 36°F / 97%

352

Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
20/267	1"	7.2	07.5 III	RC	1200/50.7	BS	IIIa0-e	A	SE Lyn	Mudlsare @ 1940.	fine
							IIa0-e				
20/153	2"	4.05	07.5 III	RC	1200/50.7	BS	IIIaJ-e	B	OSTAR/Fln		fine
20/155	1"-2"	"	"	"	"	"	"	A	"		"
20/153		"	"	"	"	"	"	B	"	T=41°	"
20/155	1"-2"	"	"	"	"	"	"	A	"	2" missing (broken) I/E	"
20/152	1"	"	"	"	"	"	"	B	"		"
20/157	1"	"	"	"	"	"	"	A	"		"
20/159		"	"	"	"	"	"	B	"		"
							"	"	"		
20/153	1"	4.05	07.5 III	RC	1200/50.7	BS	"	A	OSTAR/Fln	some cloud (at 3 rep)	fine
				"	"	"	IIa0	A	T=41° Set 5.11		Nighton
20/152	1-2"	4.05	07.5 III	"	"	"	IIIaJ-e	A	OSTAR/Fln	some cloud	fine
20/83	"	3.1	07.5 III	"	"	"	IIa0-e	A	Py Prog.	some cloud	Fe Vs Str Fine
										-1/sec Lots	

353 page #1

Date Nov 13/14. 1984 Tues-Wed Observers KK-Tm / BH-Tm

Emulsion Batches: .....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp.
	FLAT							Tung	5s
	Flat fld (twice)							Tung	5s
	FLAT				95			Tungsten	5s
	HD 217782	22 58.0	+42 13	18 45	19 15	0 28E	+42 46	Fe Ne Ne 5 mm	1s-1
7 9	HD 217675	22 57.3	+41 47	(19 25)	19 45	0 02W	+42 18		1s-1
	HD 6961	01 5.0	+54 37	19 55	20 31		+55 10	Fe Ne Clear	1s-1
12	Flat Fld					"	"	Tung Clear	15s
	HD 24760	03 51.1	+39 43	20 58	21 06	E	+	Fe Ne Clear	1s-1
	"	"	"	21 15	21 26			Fe Ne Clear	3s-3
	"	"	"	21 31	21 42.5			"	3s
	"	"	"	21 47	21 57			"	3s-3
	Flt Fld							Tungsten Clear	15 min
	HD 24760	03 51.1	+39 43	22 23	22 31			Fe Ne Clear	3s
	"	"	"	22 33	22 42				
	"	"	"	22 45	22 53.5				

Spectr. Temp. ..... Dome Temp./Hum. 13°F / 55% Transparency Conditions clear cold & windy

Focus .....

Spectr. Temp. ..... Dome Temp./Hum. ..... / .....

Gold coating on RC shut!

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Exp. Mtr.	Seeing	Ptg. Mag.	Sp.	Inst.	Grating/ Tilt	Slit	Emulsion	P.H.	Program	Remarks	Quality
				BC	830/39.5°	250/5	RETICON				
				RC	"	200/3				very wk, very wk	
				BC	"	250/3					
Clear	2"	5.17	ABVn	"	"	250/3	Yellow filter		Asm Sp/KK	No exposure meter!	weak
Clear	2"	3.6	B6p	"	"	"	"		"		
"	2"	4.5	A7V	"	"	"	"		"	T = -126°C	
				"	"	"	"				
B filter 2/200	2.4-3.4	2.71	B0.7IV	"	1800/43.5°	200/3	Reticon		E Pers prog		
2/300	2-3	"	"	"	1800/43°	"	"		"		
20/320		"	"	"	"	"	"		"		
320		"	"	"	"	"	"		"	-126°C	
20/320											
"											
"											
"											

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Date Nov 13/14 Observers Bt/Tu

Emulsion Batches:
.....
.....
.....

Plate No.	Object	R.A. 1900	Declination 1900	Starting Time E.S.T.	Ending Time E.S.T.	Hour Angle End	Declination	Comparison Type/Filter	Comparison Exp
	HD24760			23 04	23 13			FeNe clear	3
				23 15	23 24				
				23.265	2335				
				23 37	23 46				
				23 585	0 09				
				00.17	00 25				
				00 34	00 42				
				00 53	01 01		20/300		
				01.06	01 14		20/314		
	Moon			01 34	01 45		20/300	FeNe clear	3
	"			01 48	01 51		20/70	"	3
	HD24760			02 08	02 17		20/340	"	3
				02 22	02 30		~4/118		3
				02 34	02 44		4/143		3
				02 48	02 58		4/144		3

All done the same as previous page

T = −126.1°C

20/327

−126.2°C

Refil at 0^h

Too strong
sl wk

Continued next Logbook

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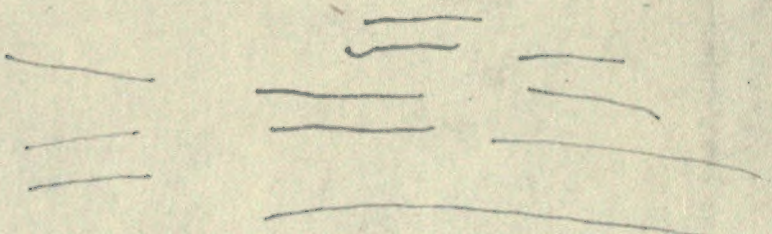
$\log_e A$

$.6 \approx \ln 2$

$10^{0.6} =$

~~F~~

~~F~~ F = aT + b

SISI = a.